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ABSTRACT

This document reports on an exhaustive study into the large-scale treatment of drug abuse in New Jersey. Seeking to assess the impact of these programs, the state provided money to cover the cost of this comprehensive, year-long survey of both methadone maintenance and drug-free treatment projects. The findings generally supported the New Jersey State Law Enforcement Planning Agency's funding policies and commitments toward drug treatment, but the study also contained some revelations. It challenged some traditional views about treatment and suggested that certain program changes could result in more effective treatment. Of major significance was the general conclusion that drug program effectiveness could be measured; also that both major methods of treatment were helping to reduce crime while helping addicts and ex-addicts to lead lives without crime. Neither method was found to be more effective than the other. The study is viewed as a valuable framework for the implementation of improvements in the operation and analysis of nationwide drug treatment programs. (Author/PC)

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# THE IMPACT OF DRUG ABUSE TREATMENT UPON CRIMINALITY: A LOOK AT 19 PROGRAMS

by

George Nash, Ph.D.

December 1973

With the assistance of the Drug Abuse Treatment Information Project Staff: Court Fisher—Associate Director, Andrew J. Bryant—Field Supervisor and Donna Aster, Klaus Hilgers, Robert Lynn, Renae Olgetree, Marie Perna, Jeffrey Steinberg, and Peter Zane.

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THE DRUG ABUSE TREATMENT INFORMATION PROJECT AT MONTCLAIR STATE COLLEGE IS A COOPERATIVE PROJECT OF THE NEW JERSEY DIVISION OF NARCOTIC AND DRUG ABUSE CONTROL AND THE STATE LAW ENFORCEMENT PLANNING AGENCY.

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## FOREWORD

During the past five years, The New Jersey State Law Enforcement Planning Agency has awarded some $7.8 million in grants to a variety of treatment programs for abusers of hard drugs with the hope that there would be a positive effect in reducing crime in the State.

The Agency, seeking to assess the impact of these programs, provided in its 1972 Criminal Justice Plan a grant that would help the State Division of Narcotic and Drug Abuse Control to cover the cost of a comprehensive, year-long survey of both methadone maintenance and drug free treatment projects. In order to assure that the survey would be independent and unbiased, the task was assigned to a special study team from Montclair State College.

What follows is the result of perhaps the most ambitious and exhaustive study ever made into the large scale treatment of drug abuse. The findings generally support the Agency's funding policies and commitments toward drug treatment as they have developed since 1969. But the study also contains some revelations. It challenges some traditional views about treatment and suggests that certain program changes could result in more effective treatment.

Of major significance to the Agency is the general conclusion that drug program effectiveness can be measured. Also that both major methods of treatment are helping to reduce crime while helping addicts and ex-addicts to lead lives without crime and that neither method is necessarily more effective than the other. The study should serve as a valuable framework for the implementation of improvements in the operation and analysis of drug treatment programs not only in New Jersey but elsewhere in the nation.

This study was funded by the State Law Enforcement Planning Agency and the New Jersey Division of Narcotic and Drug Abuse Control. The findings do not necessarily reflect the views of the funding agencies.

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# FOREWORD

The Division of Narcotic and Drug Abuse Control, New Jersey State Department of Health, assisted in the support of the Drug Abuse Treatment Information Project. We firmly believe that the Director, Dr. George Nash, has developed new insights in the area of Drug Treatment Program Evaluation which to date have not been adequately investigated. We view Dr. Nash's work on the "Measure of Criminal Abatement" as only the beginning in the development of meaningful instruments to effectively assess governmental efforts in the treatment of drug dependent individuals.

This Report is the product of Dr. George Nash's extramural investigations, therefore, statements and opinions expressed by him do not necessarily reflect a position or policy of the Division of Narcotic and Drug Abuse Control.

Robert B. Stites, Director
DIVISION OF NARCOTIC AND DRUG ABUSE CONTROL

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# CHAPTER 1

## Summary

The Drug Abuse Treatment Information Project (DATIP) was unique in both its scope and depth. Funded by New Jersey's State Law Enforcement Planning Agency and the New Jersey Department of Health, Division of Narcotic and Drug Abuse Control, the study was designed to assess the impact of drug abuse treatment upon criminality.

### Methodology

Between July 1, 1972 and June 30, 1973, 19 drug abuse treatment programs were studied. They were representative of drug abuse treatment methods in the State of New Jersey during that period. The data on the performance of clients in treatment has been taken from their arrest records--pre and post treatment. The study includes New Jersey-wide arrest records for a sample of 30 people at each of the 17 programs where the majority of the clients were over 18 years of age.

In addition to arrest histories on the follow-up sample, DATIP recorded the type of treatment rendered all clients and client characteristics in the 19 programs for the quarter, October 1 through December 31, 1972. As of December 31, 1972, there were 2,075 clients in treatment at the programs included in the study. In addition to compiling the arrest histories of 577 individuals in the follow-up study, the project staff interviewed 227 of these drug abusers in person. An attempt was made to determine how each of the people on whom the project staff had data was functioning in terms of vocational adjustment and substance abuse.

Information was also obtained about the staffs of each of the programs. A roster of staff members and their characteristics was completed for each program and staff members completed a questionnaire about their attitudes.

This variety of measures not only allowed the programs to be described, but also allowed the project to relate a variety of program characteristics to the program's performance as determined by the pre and post treatment arrest histories and the program's retention rate.

### Involvement in criminality

The DATIP study of the arrest records of those in the follow-up sample demonstrated the heavy involvement of the drug abuse treatment clients in criminality. The arrest histories differentiated dramatically between the nine methadone treatment programs and the eight drug free programs. Not surprisingly, the clients at the methadone treatment programs were older and had more arrests prior to entering treatment. Because these differences between the two types of treatment were so substantial, this report will describe findings separately for the two types of programs.

Eighty-three percent of the methadone treatment clients and 57 percent of the drug free clients had been arrested prior to beginning treatment. (Table 3.1) The average methadone treatment client had 5.7 arrests and the average drug free treatment client 2.3 arrests prior to beginning treatment. (The average for each type of treatment includes all clients in the follow-up sample, even those who had not been arrested.) Because the methadone treatment clients were of an older average age than the drug free treatment clients, their number of arrests per year were quite similar. Taking the number of years between the 18th birthdate and the date they entered treatment, the clients from each type of program averaged approximately two-thirds of an arrest per year. This means that the clients for each type of program had approximately the same pre-treatment arrest rate. The rate of arrests for both modalities was approximately two arrests for each three year period preceding entry into treatment.

## Crime based on drug habit support

Although there were a substantial number of arrests for narcotics related charges such as the sale and abuse of drugs, the majority of arrests at both types of treatment programs, by approximately a two-to-one margin were for other types of crimes such as breaking and entering and robbery. (Table 4.1) There were differences between different types of clients. Whites and younger people had a higher proportion of their arrests for narcotic related charges. (Table 4.2) However, these differences were minor. The great majority of all arrests for all types of clients were for the kind of crimes committed in order to support a drug habit rather than for the use and sale of drugs.

DATIP also determined what proportion of all arrests that occurred after the age of 18 occurred after those in the follow-up sample began to use heroin. More than four-fifths of all these arrests occurred after they began using heroin. (Table 4.3) Ninety-four percent of the average methadone treatment clients' arrests occurred after they began using heroin. The comparable arrest figure for the drug free programs was 83 percent.

One question the study sought to examine was the involvement of the clients of drug abuse treatment programs in criminality prior to their beginning treatment. In summary, study findings showed that the clients of drug abuse treatment programs have extensive arrest histories; that the majority of these arrests are for the types of crimes addicts commit to obtain money for drugs; and that most of the arrests occurred after the inception of heroin use.

## Arrest abatement: the central measure

The Drug Abuse Treatment Information Project's measure of effectiveness for each treatment program is the difference between the number of arrests that occurred per year prior to beginning treatment and the number after treatment has begun. Overall, there was a reduction in the number of arrests per year. DATIP termed this reduction the abatement in arrests due to treatment. It is the central measure of the study.

There were substantial differences between the methadone treatment programs. Of all those in the project follow-up sample who entered methadone treatment, 33 percent were arrested after beginning treatment. (Table 3.2) For drug free treatment the proportion being arrested after beginning treatment was 23 percent. However, the number of arrests per year for those entering treatment was relatively similar for the two types of programs. The methadone clients averaged .51 arrests per year after beginning treatment and the drug free clients averaged .46 arrests per year. As would be expected, the methadone clients who stayed in treatment and the drug free clients who either stayed longer in treatment (or were considered by their programs as having graduated) did considerably better. Only 14 percent of the drug free clients who stayed in treatment 12 months or longer or graduated were arrested subsequent to beginning treatment. For methadone clients who stayed in treatment for 12 months or longer, the proportion arrested was 27 percent. The number of arrests per year for those continuing in treatment dropped to .24 per year for the drug free clients and .43 per year for the methadone clients.

For the drug free clients there was a progressive improvement with the amount of time spent in treatment. The people who spent six through 11 months were less likely to be arrested than those who spent less time. The people who spent 12 months or longer were even less likely to be arrested. There was no similar relationship for the methadone clients. (Table 3.4) It appears that methadone clients were less likely to be arrested only so long as they stayed in treatment; but even those who stayed in treatment incurred a fairly high rate of arrests--about one for every two and a half years in treatment.

## Fewer arrests of drug free clients

The rate of abatement is the comparison of the number of arrests per year prior to beginning treatment and the arrests per year after beginning treatment. Table 3.6 shows the results for the two different types of treatment programs. For drug free clients in the follow-up sample the number of arrests per year prior to beginning treatment was .69 and the number of arrests per year subsequent to entering treatment was .46. Therefore the abatement of arrests due to treatment was .23 arrests per year. (This figure was for all who entered treatment regardless of how long they stayed.) For the methadone clients the pre treatment figure was .67 arrests per year and the post treatment figure was .51 arrests per year for an abatement of .16 arrests per year. In round figures there was an approximate decrease in the number of arrests of one per year for each four drug free clients and for each six methadone clients. The abatement in arrests due to treatment was greater for the drug free programs than for the methadone treatment programs.

An assessment of the overall impact of methadone treatment compared to drug free treatment is complicated by the fact that at any given time, many more people are enrolled in methadone treatment than are enrolled in drug free treatment. In the 18 programs included in the study (that were still in operation) there were nearly four times as many people enrolled in methadone treatment on December 31, 1972 as was the case in drug free treatment. (Table 5.11) The nine methadone programs enrolled a total of 1,494 clients compared to only 334 clients for the drug free programs. Although there were more people enrolled in methadone treatment than in drug free treatment, methadone clients had to continue to be enrolled in treatment to experience abatement in arrests, whereas those people who completed drug free treatment showed a decrease in arrests even after leaving treatment. The project attempted to verify this by following up a sample of entrants into drug free treatment at one program for one additional year. The study found that the number of arrests per year after beginning treatment held steady for the additional year. (Table 3.3)

What this means is that in the long run, drug free programs which serve a steady stream of new clients are able to reach more different people and cause more total abatement in arrests than do methadone programs.

## Abatement formula

Knowing the abatement in arrests that the clients in the follow-up sample experienced, the study attempted to project the decrease, or abatement in arrests, caused by all the methadone programs and by all the drug free programs. DATIP did this by a complicated process which involved the total number of new clients entering treatment in a given period of time and the program's retention rate. The methadone treatment programs and the drug free treatment programs each caused a reduction of approximately 50 percent in the number of arrests of their clients that would have occurred had they not instead entered treatment.

Specifically, in six of the seven drug free treatment programs where project staff was able to measure abatement, program clients could have been expected to have incurred 254 arrests in the course of the year. They incurred only 126, a difference of 50 percent. (Table 7.1) In the eight of nine methadone treatment programs where abatement occurred the clients would have been expected to have incurred 768 arrests. Only 394 occurred for a difference of 48 percent. (Table 7.2)

Despite the overall similarities in effectiveness of the two types of programs there are substantial differences among individual programs and among different types of clients.

DATIP had abatement data for nine methadone programs and eight drug free programs. At two of the drug free programs compilation of data was impractical because the average age of clients was below 18 and the State Police maintain arrest records only for persons 18 or over. At eight of the nine methadone programs there was an abatement in arrests for the average client. There was more variation among the drug free programs than was the case with the methadone programs. (Table 3.7) The most effective methadone program abated .29 arrests per year and the least effective had its clients actually show an increase of .17 arrests per year. At the most effective drug free program, the abatement in arrests was .95 per year for the average client and at the least effective drug free program the clients experienced .60 or more arrests per year after beginning treatment than they did before.

Once each program's rate of abatement was determined, the project staff was able to determine what characteristics of the program and the clients were associated with or correlated with the abatement rate. For the methadone programs and for the drug free programs the correlates of a high abatement rate in arrests were very different.

## Staff effectiveness: the key in drug free treatment

For the drug free programs there were many items from the questionnaire completed by the staff that correlated quite highly with the rate of abatement in arrests of the program. Specifically at those drug free programs where staff members reported that staff teamwork was excellent, and the program's leadership was excellent, there was a much higher rate of abatement than in those programs with less positive assessments by the staff. For drug free programs leadership, teamwork, and staff morale were important correlates of effectiveness.

There was only one additional correlate of effectiveness in drug free programs and that was a surprising one. The fewer clients served by an individual staff member, the less effective was the program in terms of abating arrests. Specifically, at those programs which had hard working staff members each serving a large number of clients there was more abatement than at the programs where staff members had fewer clients to serve. In the study staff's opinion, this was probably because the more effective programs recruited and attracted more clients. This resulted both in a higher client-to-staff ratio and in increased effectiveness. It certainly demonstrates that simply increasing the number of staff members at a given program will not necessarily increase its effectiveness.

Both treatment modes showed abatement but for different reasons. There was no relation between the staff's perception of leadership and teamwork at the methadone programs and the abatement in arrests. Similarly, there was no relationship either positive or negative between the staff/client ratio at a methadone treatment program and the effectiveness of the program. Part of this is due to the fact that the methadone programs are more similar and more homogeneous than the drug free programs.

## Employment, arrest abatement correlation

For the methadone treatment programs a substantial abatement in arrests was correlated with the characteristics of the clients and not of the programs. Employment was the key variable. Those methadone clinics whose clients were more likely to report that they had stable employment histories prior to entering treatment were more likely to have high abatement rates. Another important factor was the post treatment employment picture. At methadone clinics with a large proportion of the clients reporting regular employment in the last three months, the effectiveness, or abatement in arrests, was much higher. For the methadone programs the only substantial correlate of abatement was the employment of the clients before and after beginning treatment. In other words, at the methadone clinics whose clients had better employment histories before beginning treatment and were employed after entering treatment, the abatement rate in arrests was much higher.

Methadone clients' backgrounds were also related to abatement in arrests. Those programs whose clients were more likely to report that they had lived in intact families with both their fathers and mothers from ages 12 to 16 were more likely to have a high abatement in arrests. Similarly, clients who came from stable families and who had completed high school were more likely to have a stable employment history and to be employed after entering treatment.

## Client characteristics key in methadone treatment

This analysis determined that the characteristics of the staff and the program were an important determinant of effectiveness for the drug free programs, but not for the methadone programs. For the methadone programs it was largely the characteristics of the clients before they entered treatment, and particularly their employment skills, that determined the effectiveness of the programs. The effectiveness of the methadone programs, at least in New Jersey, appears to be the result of the characteristics of the clients before they began treatment.

DATIP also recorded a number of statistics relating to the staffing at each of the programs which turned out not to be related to the effectiveness of the programs. Of major interest was the wide variation in staff costs per client that occurred within both the methadone treatment programs and the drug free treatment programs. For example, the most efficient drug free program served 5.5 clients for every staff member and the least efficient program served only 0.6 clients for each staff member. (This program had more staff than it did clients.) It followed that there was a large variation in the staff costs per client. The most expensive drug free program cost $11,300 in staff salaries for every client in treatment. The least expensive cost just $2,100 in staff costs for every client in treatment (Table 5.11)

## Program effectiveness not related to cost, staff size

The variation with methadone programs was similar. The most efficient methadone treatment program served 12.7 clients for each staff member and the least efficient served only 2.2 clients for each staff member. (Costs ranged between $700 for staff for the most efficient program to $3,400 for the least efficient program).

In view of the fact that there was no positive relationship between the size of the staff and the abatement in criminality, these large variations in costs and staff client ratios do not seem to be justified. In other words, because the less expensive programs are at least as effective in terms of abatement as the more expensive programs, there might be good reason to feel that the more expensive programs should either be able to increase the number of clients served or cut the size of their staffs.

That there was a wide variation in costs should not have been surprising in that up until this study there were no reliable statistics available as to the costs per client and there was no way to relate cost per client to a program's effectiveness.

Just as there were important differences between programs in relation to the abatement of arrests, there were important differences between different types of clients on the basis of the demographic characteristics of age, sex and ethnicity. Generally, these demographic differences were the same between methadone treatment and drug free treatment, but there was not complete consistency.

## Abatement tied to client characteristics

The biggest difference was between younger clients and older clients. DATIP divided those in the follow-up sample into three groups: the young, age 22 or less; the medium age, between 23 and 26; and the older clients who were 27 or older. Both drug free and methadone programs were effective with the young and medium age groups, but not with the older group. (Table 3.8) The largest abatement occurred with the young methadone clients who showed an improvement of .44 arrests per year after beginning treatment. For the medium age methadone clients abatement was .26 arrests per year. However, the number of arrests per year after beginning treatment was the same as the number of arrests before beginning treatment for the older clients. There was less variation between the young and medium age drug free clients, but the older clients in drug free treatment actually did worse after treatment than before. The younger drug free clients showed an improvement of .35 arrests per year; those of medium age showed an improvement of .39 arrests per year; but the older drug free clients actually had .08 more arrests per year after beginning treatment than they did before beginning treatment.

There were major differences between the two types of treatment in the age distribution of their clients. In the follow-up sample 62 percent of those in drug free treatment were in the young group compared to only 12 percent of those in the methadone follow-up sample. Forty-eight percent of those in the methadone follow-up sample were older (27 or more) compared to only 15 percent of the drug free sample.

There were important differences in the effectiveness of treatment between men and women. In both types of treatment women had many fewer arrests per year before beginning treatment than did men. However, there was very little difference in the pre-treatment and post-treatment arrest figures for women in either type of treatment. The women in methadone treatment had only .09 less arrests per year and the women in drug free treatment incurred .03 more arrests per year after beginning treatment than they did before.

Whites and blacks did differently relative to one another when in drug free treatment than in methadone treatment. In methadone treatment the abatement was identical between whites and blacks, despite the fact that whites had slightly more arrests per year before beginning treatment than did the blacks. In drug free treatment, the abatement was much larger for whites than it was for blacks. This is largely due to the fact that whites in drug free treatment had many more arrests per year prior to beginning treatment than did the blacks. The performance after entering treatment was the same and therefore the abatement for whites was .45 arrests per year where the abatement for blacks was only .16 per year.

## A role for each treatment method

The question that is sure to be asked of this study is: "Which is more effective, methadone treatment or drug free treatment?" The answer appears to be that each is effective but that each type of treatment works in a very different fashion and it works differently with different types of clients. The overwhelming majority of clients in drug free treatment are young. Both methadone treatment and drug free treatment are effective with their younger and middle age clients. However, neither type of treatment is effective with those 27 years of age or older and although few of the drug free clients are older than 27, approximately one-half of those in methadone treatment are.

Furthermore, drug free treatment causes a decrease in the likelihood of being arrested even after people have left treatment, whereas clients must remain in methadone treatment for an abatement in arrests to continue. The major findings of this study are that there appears to be a role for each type of treatment and that it is possible to measure the effectiveness of both methadone and drug free treatment.

# CHAPTER 2

## Introduction and Methodology

### 1. Background, introduction and funding

This study was principally financed by The New Jersey State Law Enforcement Planning Agency (SLEPA). Rather than evaluate a cross section of all its criminal justice programs, SLEPA decided to attempt to evaluate all of the drug treatment programs it had funded and this complete evaluation of all the programs in one area would be the major evaluative thrust for the year, 1973.

Additional funding for the study was provided by the New Jersey Department of Health's Division of Narcotic and Drug Abuse Control, the Urban Education Corps, and Montclair State College.

The study was logistically housed at Montclair State College where the author and project director was also Adjunct Professor of Sociology.

For the staff of the project it was a work study program. The staff were workers and students at the same time earning Masters Degrees at Montclair State College while they worked on the research project. The author was both project director and principal instructor for the staff, teaching five out of the ten courses that were required of the students.

This project was the first phase of a continuing effort to evaluate and report on drug abuse treatment in New Jersey. At the time of the issuance of this report, the project is in its second phase which will be completed by December 31, 1973.

The author's background in drug abuse treatment evaluation dates to 1967 at Columbia University when he began a large scale study of a number of treatment programs for the New York State Narcotic Addiction Control Commission. His involvement in New Jersey began in the spring of 1970 when he described the drug abuse treatment programs in Paterson for the City of Paterson. From 1971 until the beginning of this project in July, 1972 the director and the associate director worked for the Division of Narcotic and Drug Abuse Control helping to design and monitor programs and laying the groundwork for the process of evaluation. The field supervisor for this study was a former clinic supervisor in the Department of Health who was on leave from the State.

It was of utmost importance that this study be free of any controls or censorship. The location of the project at Montclair State College helped to assure the freedom and independence of the study.

### 2. The aim of the study

The following is an abridged version of what appeared in the proposal:

In its 1971 and 1972 New Jersey Plans for Criminal Justice, SLEPA has defined as one major goal a reduction in the need and desire to commit crime. Within that goal area, the plans outlined two specific tasks: "Prevention and Treatment of Narcotic and Dangerous Drug Abuse."

Approximately one million dollars of SLEPA's fiscal year 1970 funds were awarded to drug treatment projects, with an additional two million dollars awarded from fiscal year 1971 funds. Most of the $2.5 million of new fiscal year 1972 was also awarded to projects offering actual treatment services to addicts. Additional allocations have been awarded to projects emphasizing drug abuse education and prevention and law enforcement activities, rather than direct rehabilitation services.

As described in State Planning Agency Guide 67 (November 1971), the general problem of evaluation is that:

> "...Too little is known about the degree to which current projects and programs have been effective in meeting the goals which have been established for them. Moreover, even less is known about the relationship of improvements in the criminal justice system to the reduction of crime and delinquency.

In terms of drug abuse treatment projects, the problem is that although successful treatment facilities should be able to contribute to crime reduction and criminal justice system improvement, too little is known about the extent to which this actually takes place. In theory, treatment programs should contribute to a reduction in crime, by keeping drug abusers out of criminal activity while undergoing rehabilitation and, more significantly, by successfully changing client attitudes and behavior so that they no longer require criminal activity to support narcotic dependency.

"This study, has sought to explore the relationship between SLEPA funded drug treatment programs and criminal activity in a variety of New Jersey communities, focusing on the contribution of such programs to the goals of crime reduction and criminal justice system improvement...

This concentrated look at SLEPA drug abuse treatment activities should permit eventual generalization which would aid in evaluation of other types of SLEPA programs...

"In general, there are three types of problems which must be dealt with in doing a study of this type:

1. If the program were not effective, it could not be expected to contribute to a reduction of crime, no matter what the crime

statistics showed. Consequently, the study must deal with the effectiveness of each project and the impact of the criminal behavior of individual clients. Specifically, we will attempt to assess how much crime is prevented by each program. One way to do this is by estimating how much crime project clients might have been expected to engage in during the period of time they were in the program or afterwards on the basis of their previous performance...

2. Even if projects are successful in reducing the criminal behavior of their clients, there may be other factors operating in the community or larger society to increase the crime rate, such as ineffectiveness of other criminal justice system components...

3. It may be that there are more effective ways to reduce victim-related crime caused by drug abusers than to fund treatment programs...

'The study will not only look at the impact of drug treatment programs on victim-related crime, but will attempt to deal with the problem of costs and cost effectiveness. It may be that a given treatment project is very effective, but is unjustified on the basis of cost.

## 3. Methodology

The strength of this study is that we have both a number of different instruments and a varied group of 19 treatment programs to use them on. We basically did three separate studies: a follow-up study, a study of treatment rendered, and a study of the staffs. We will report on each separately:

a. The follow-up study For each program we attempted to draw the names of 30 consecutive entrants into treatment centering around the period, October 15, 1971. Our original intention was to follow these people up, to interview them, and to determine with the aid of the State Police, Criminal Identification Unit, pre and post treatment arrest behavior. We then would have had 19 programs' retention rates and behavior arrests rates. We would also have been able to relate background data on individuals to their functioning after treatment.

We ran into four separate types of problems with the follow-up sample: difficulty of defining uniformly the date of entry into treatment, poor records in treatment programs, the fact that we could only do State Police record checks for those above 18, and the fact that it was almost impossible to reach and interview those who had left treatment. Our definition of entry into drug free treatment varied with the programs and definition is listed in Table 2.1.

Most of the methadone treatment clinics built up their clients there in ambulatory build-up programs and we usually use the day begun build-up as the day of entry into treatment.

We took the names from the follow-up sample and submitted them to the Criminal Identification Unit of the New Jersey State Police and they provided us with the number of arrests for each person who had a record of arrests in New Jersey for three time periods: before beginning heroin use, after beginning heroin use and before beginning treatment and after beginning treatment. The arrests were broken into two types: narcotics related (possession, sale or use of drugs or possession of drug related paraphenalia, or disorderly persons arrests with narcotics specified) and other types of arrests which included breaking and entering, larceny, and all the types of crimes committed by non-addicts.

The advantage of the State Police follow-up is that it gave us post treatment data on every person in our follow-up sample whether they remained in treatment or not. The weakness of previous studies done by this author and others has been that there have always been a large proportion of clients whose status at the time of follow-up was unknown.

In the follow-up of clients who had been in treatment at the New York State Narcotic Addiction Control Commission's facilities directed by this author, the only measure of outcome we had was whether or not the client was still enrolled in aftercare.[1] It would have been possible for a person to have remained off drugs and stopped going to aftercare, and conversely a person could have been using drugs and still going to aftercare. In the study done of Phoenix House by this author, the only measure of outcome we had was whether clients were still enrolled in treatment or were graduates.[2] We knew very little about the splitees, except for a follow-up study we did on a small random sample.

From the State Police we have New Jersey wide arrests data on 448 people from 17 treatment programs. For 419 of the 448 follow-up clients in our sample from 1971 we also have reports from the treatment programs or other third persons as to how the clients were doing.

Another advantage of the State Police Arrest data is that it is a cumulative record of all a person's behavior since entering treatment and not just a statement about how he is doing at a given point in time.

The principal disadvantage of the arrest data is that it includes only arrests of those 18 years of age or older and we have nothing on juvenile offenses. However, the Criminal Identification System of the New Jersey State Police does have reports of arrests from all localities in New Jersey stored in one central location and these were the source of our data. Arrests do not perfectly reflect social functioning. A person may commit an illegal act and not be apprehended, or he may have been arrested though innocent. Arrests are the best comprehensive, objective data available, but there are limitations.

Although the original data was gathered on individuals, no names were attached either to the questionnaires or the arrest data. The results reported herein are entirely statistical, and no one could determine from this report or any of our data, who any given client in any given treatment program is or how he has been doing.

We did interview 227 of the 547 people in the 1971 follow-up sample. Almost all of these individuals were still in treatment. The overwhelming majority of our personal interviews were with methadone treatment clients, as a much higher proportion of clients had left drug free treatment. We are now gathering data on additional individuals from each program during Phase II of the Drug Abuse Treatment Information Project and a comprehensive report on background characteristics of clients in treatment will be issued at a later date.

b. The quarterly report of treatment We completed a report on the treatment rendered to all clients who received treatment at the 19 programs between October 1, and December 31, 1972. We included not only the type of treatment they received, but also certain demographic characteristics and for the methadone clients a report on their functioning.

c. Reports on staff For each of the programs we got two items of data relating to the staff. We completed a roster of the staff which included how much time they worked, how much they were paid and certain demographic characteristics for each person. Furthermore, we distributed a questionnaire which was completed by 253 staff members from all the programs in our sample.

The advantage of having a variety of forms of data is that they can all be related to one another. The principal item of analysis in this study is a comparison of arrests before treatment with arrests after treatment. Once we determined the impact of treatment upon arrests we were able to relate the other items of data at the programs to the changes in arrest patterns.

This is the first study in our knowledge to have comprehensive statewide arrest data pre and post treatment, on a number of treatment programs. Most previous studies have had to ascertain post treatment status either from the clients themselves or from the staffs of treatment programs. The one study we are aware of that has had comparable arrest data is the study of the Brooklyn New York based Addiction Research and Treatment Corporation's Evaluation Team headed by Irving Lukoff of the Columbia University

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School of Social Work. Lukoff feels that studies which rely on either the clients or staffs of treatment programs to report on criminal activities probably suffer serious underreporting. Lukoff and Hayim found that their own respondents reported fewer arrests than they had actually experienced.[3] Lukoff's study is the one most similar to this one, its limitation being that it looks at only one treatment program.

## 4. The treatment programs studied

We chose the 19 programs included herein on three criteria: their having received funding from the State Law Enforcement Planning Agency, and having been in operation long enough to have assembled a track record, and we also wanted a cross section of different types of treatment programs.

The names of the 19 programs are listed in Table 2.1. We included five methadone treatment* clinics formally operated by individual counties and since July, 1971, operated by the Division of Narcotic and Drug Abuse Control of the New Jersey Department of Health. These were: the Camden Clinic, the Elizabeth Clinic, the Mercer Clinic, the Paterson Clinic, and the Plainfield Clinic. The State Law Enforcement Planning Agency provided funding for the methadone components of all of these clinics, but each of the clinics also offered some services to non-methadone clients who were not included in our follow-up sample.

We also included the methadone program of the Monsignor Wall Center in Hackensack operated by Bergen County. The privately sponsored Patrick House program in Jersey City was the only methadone treatment program in our sample that did not offer other treatment, but it has since merged with the former drug free Liberty Village program funded by the National Institute of Mental Health and is now known as the Community Drug Program of Hudson County offering both types of treatment.

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*This treatment was pioneered by Drs. Dole and Nyswander at the Beth Israel Medical Center in New York City. Clients are stabilized on a daily dosage of methadone, a low cost synthetic narcotic, which removes the physical desire for other opiates so long as treatment is continued. Methadone is also used in declining dosages for withdrawal, but this is not methadone treatment.

## Table 2.1

### Drug abuse treatment information project - follow-up sample

| Location | Facility Name | Sample size | Number with State Police arrest data | Number of first-person interviews | Range of dates of entry into treatment |
|---|---|---|---|---|---|
| Methadone maintenance treatment | | | | | |
| Camden | Camden Clinic | 26 | 25 | 21 | 12/70-9/72 |
| Elizabeth | Elizabeth Clinic | 39 | 39 | 14 | 7/13/71-11/29/71 |
| Trenton | Mercer Clinic | 31 | 17 | 17 | 8/10/71-12/14/71 |
| Paterson | Paterson Clinic | 31 | 28 | 24 | 7/1/71-12/31/71 |
| Plainfield | Plainfield Clinic | 30 | 30 | 19 | 1/25/71-12/28/71 |
| Hackensack | Monsignor Wall | 28 | 27 | 21 | 8/1/71-11/29/71 |
| Atlantic City | Narco Methadone | 13 | 12 | 4 | 10/1/71-11/11/71 |
| Paterson | PUADA Methadone | 19 | 19 | 11 | 11/22/71-12/17/71 |
| Jersey City | Patrick House | 52 | 52 | 35 | 7/24/71-8/30/71[3] |
| Drug free treatment | | | | | |
| Camden | Concept House | 30 | 29 | 2 | 8/9/71-12/30/71 |
| Newark | Integrity House | 30 | 0 | 11 | 8/1/71-12/30/71 |
| Atlantic City | Narco Drug Free | 20 | 19 | 2 | 10/1/71-10/11/71 |
| Paterson | PUADA Drug Free | 20 | 20 | 0 | 10/21/71-11/16/71 |
| Jersey City | Christopher House | 30 | 30 | 6 | 11/1/71-3/8/72[4] |
| North Bergen | Harold House | 29 | 0 | 0 | 9/30/71-6/9/72 |
| Cherry Hills | Operation Concern | 30 | 14 | 9 | 7/2/71-12/31/71 |
| Paterson | Northside Addicts Rehab. Center | 29 | 28 | 6 | 10/18/71-11/23/71 |
| Paterson | Dismas House | 30 | 30 | 15 | 9/1/71-11/11/71 |
| Paterson | Damon House | 30 | 29 | 10 | 5/10/71-3/13/72 |
| | Drug free sample[5] (1970) | 30 | 30 | 0 | 2/23/70-7/10/70 |
| | Totals | 577[1] | 478[2] | 227 | |

[1] Includes one individual in two different samples, i.e., one person counted twice.

[2] Excludes 76 juveniles, 23 others; includes one person counted twice.

[3] Patrick House temporarily closed intake of new clients in September 1971.

[4] Ten clients transferred from Liberty Village 11/1/71 to open Christopher House after completing three weeks to three months prior inpatient treatment.

[5] An additional sample was drawn from 1970 entrants to one of the above programs.

There were two multi-modality programs where we studied both the drug free* clients and the methadone treatment clients. These were Narco in Atlantic City whose drug free program is residential and Paterson United Against Drug Abuse (PUADA) in Paterson, which was non-residential. The drug free component of PUADA was phased out during 1972, but we were able to complete the follow-up, despite the fact that the program had ceased to exist.

The drug free programs included Harold House, which was operated by Bergen County and the Youth Facility of Integrity House which was funded by SLEPA, each of which served primarily clients under 18. Unfortunately we were not able to include their clients in the State Police follow-up.

Concept House, Damon House, Dismas House and the Northside Addicts Rehabilitation Center, were all residential drug free treatment programs that received funding from SLEPA. For one drug free program we also drew a follow-up sample from 1970 to see how the clients fared two years after treatment compared to those who we were able to follow-up for only a year and a half. Christopher House was a component of the above mentioned Liberty Village program whose clients were referrals from the United States Attorney's Office under a Federal Program.

Operation Concern was the only non-residential drug free program in our sample. The program requires its participants to spend most of each day there. Although it is different from the residential facilities, Operation Concern's performance data (i.e. retention and abatement) were average compared to the other drug free programs and we therefore have included its data in with the rest.

Throughout this report we will present summary statistics for the clients of drug free treatment and methadone treatment separately. The reason for this is that the two types of clients are so different that to lump them together would be misleading. The principal difference is age. Sixty-two percent of the drug free clients in the follow-up sample were 22 years of age or younger compared to only 12 percent of the methadone treatment clients.

Because we are principally interested in treatment programs we will present averages for programs rather than the total number of people in the programs. This means that we will take the figures for each of the nine methadone programs and divide them by nine to get the average for the total. This treats each program as equal despite the fact that our samples from some programs were larger than our samples for others.

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*Drug free treatment encompasses a wide variety of forms, but most programs have borrowed at least some elements from the forerunner of therapeutic communities, Synanon. The most common elements include proving motivation prior to entry, voluntary stay, peer pressure, group therapy, and the exclusion of drugs for therapy including tranquilizers. All of the programs in this study include all these elements except that one leaving the prison program goes back to the regular State Prison system.

We feel that the State Police follow-up statistics which are based on random follow-ups of at least 25 clients at 11 of the 17 programs are sufficiently large samples to permit confident generalizations. The six smaller samples' results should be viewed with more caution, especially the samples of 14 at Operation Concern and 12 at the Narco methadone treatment program.

## FOOTNOTES

1. The results of this study are the subject of Dan Waldorf's Careers in Dope; Prentice Hall; Englewood Cliffs, New Jersey; 1973.

2. Nash, George; Waldorf, Dan; Foster, Kay and Kyllingstad, Ann: "The Phoenix House Program: The Result of a Two Year Follow-up"; 1971, unpublished, but summarized in Brecher, Edward M. and the Editors of Consumers Union Report: Licit and Illicit Drugs; Little Brown; Boston; 1972; page 80.

3. Hayim, G. and Lukoff, I.: "Heroin Use and Crime in a Methadone Maintenance Program - An Interim Report"; National Criminal Justice System Document NCJ-08922; Law Enforcement Assistance Administration, U.S. Department of Justice; Washington; 1973.

## CHAPTER 3

## The Impact of Treatment Upon Criminality

This chapter will outline the essential findings of the study. We will compare the number of arrests per year for treatment clients before they began treatment and subsequently. To the extent that there is a difference, we will consider this as abatement* of or reduction in criminality due to treatment. Once we have established the extent to which there is abatement, we will then compare abatement among treatment programs and by client characteristics.

### 1. The measures

When we drew the sample of approximately 30 persons per treatment program who entered treatment in the fall of 1971, we prepared a form which we submitted to the New Jersey State Police. On this form we included the date that the client entered treatment so that arrests were able to be put into one of two categories: prior to entry into treatment or subsequent to entry into treatment. The State Police collect data only on arrests that occur after the age of 18. We thus constructed two measures:

### 1) Arrests per year after 18 prior to entry into treatment

We got this figure by dividing the total number of arrests that occurred between the age of 18 and the date of entry into treatment and dividing it by the number of years that had lapsed. Many studies which consider arrests simply take the number of arrests that occurred in the year prior to entry into treatment or prison and compare this with behavior at some later date. It is our feeling that it is much better to have a treatment client's complete arrest history and not just his arrest history during the year before he enters treatment. That year before entering treatment could be expected to have a higher than average number of arrests. It may well be that it was the arrest that caused the client to enter treatment.

### 2) Arrests per year subsequent to entry into treatment

The average client in our follow-up sample entered treatment on October 1, 1971. The State Police collected arrest data on clients through the last day of February 1973. Thus on average our data is based on a follow-up of 17 months. However, because samples varied from program to program the period of follow-up actually varied from a minimum of 14 months to a maximum of 20 months. So that the time base for comparison would be uniform, we divided the number of arrests subsequent to entry into treatment by the number of months the clients in that treatment program had averaged since they entered treatment. We will present hereafter the number of arrests per year since treatment began.

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*According to one dictionary, "In law a reduction, removal, pulling down."

One of the comparisons in which we will be most interested will be the difference between methadone treatment and drug free treatment. The difference in the nature of these two forms of treatment will have an impact on our measure. The clients in methadone treatment were living in the community during their entire time since entry into treatment and thus they were exposed to the possibility of arrest from the time they entered treatment. The drug free treatment programs are intended to last anywhere from six to 12 months and in some cases longer. To the extent that the clients remained in residential treatment there is much less of an exposure to arrest. To exemplify: the average client in one drug free program entered treatment on October 1, 1971. If he stayed in treatment for the intended 12 months he had fewer opportunities to be arrested prior to his completing treatment at the end of September 1972. Consequently, he was only living in the community vulnerable to arrest for only five of the 17 months between the time we started counting his arrests subsequent to entry into treatment to the time we shut off data collection. In effect then, there is a bias in the figures in favor of drug free treatment over methadone treatment for those clients who stay in treatment. This difference would become less important if the follow-up occurred over a three to five year span.

### Abatement in arrests due to treatment

To the extent that there is a difference between the average number of arrests per year after 18 and before beginning treatment and the average number of arrests per year subsequent to the beginning of treatment, we will consider this abatement in arrests as due to treatment. This will be the central measure of program effectiveness in the study.

### 2. Arrests before treatment

Eighty-three percent of the methadone clients had been arrested prior to entry into treatment and 57 percent of the drug free clients had been arrested prior to entry into treatment. We have arrest data for all nine of the methadone treatment programs in our sample; but for only eight of the ten drug free programs. The clients at Harold House and at Integrity House Youth Facility were too young for arrest data to be available. At Operation Concern, which also caters to younger clients, we have arrest data for only 14 of the 30 clients in our sample because the other 16 were too young. Thus, we will be comparing eight drug free treatment programs to nine methadone treatment programs.

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Table 3.1
Pretreatment arrest statistics
by type of treatment

| Pretreatment arrest history | Type of treatment | |
|---|---|---|
| | Methadone | Drug free |
| % arrested | 83% | 57% |
| Total number of arrests per person | 5.7 | 2.3 |
| Number of arrests per year after 18 per person | .67 | .69 |
| Number of clients in follow-up sample | 249 | 198 |

Reads: 83 percent of the 249 clients in the follow-up sample who entered methadone treatment in fall 1971 had been arrested prior to treatment.

The average number of arrests per year after 18 prior to entry into treatment was .70 for the drug free programs and .67 for the methadone programs. There is a tendency for the arrests per year to be somewhat lower for those who are older because a reasonable number of the older clients do not begin heroin use until their early twenties. Thus their arrests did not occur at a uniform number per year from age 18 until entry into treatment. The average methadone client began using heroin at the age of 19.5 which was on average 1963. The average drug free client began using heroin only a little younger, at 18.5 years of age. The average number of arrests per year using heroin was .66 for the methadone clients and .53 for drug free clients.

Because the methadone clients were older, they had an average of 5.7 arrests each prior to entry into treatment compared to only 2.3 arrests each for the drug free clients.

There is much more variation between the drug free treatment programs than is the case with the methadone programs. The total number of arrests prior to treatment ranged from the low of 3.9 at one methadone program to a high of 8.2 at another. Among the drug free programs the lowest number of arrests prior to treatment was 0.8, and the highest was 6.7 arrests, or higher than the average for methadone treatment programs.

We feel it is important for a consideration of effectiveness to compare the number of arrests per year subsequent to treatment to the number of arrests per year prior to treatment because this enables us to account for differential exposure to arrest. It is probable that the differential rate of arrest from one methadone program to another is reflective of the level of police activity in the community. Because most treatment clients continue to live in the same locality, this pre-treatment post-treatment comparison takes regional variation into account.

### 3. Arrests after treatment

A much greater proportion of the methadone clients had been arrested prior to treatment, and 10 percent less of the drug free clients were arrested subsequent to treatment than were the methadone clients. In the average of 17 months that occurred between entry into treatment and the end of our compling arrest data, 25 percent of those who entered the drug free treatment programs were subsequently arrested compared to 33 percent of those who entered methadone treatment programs. The average number of arrests per year since treatment began was similar for both types of treatment--.51 arrests per year for methadone clients and .46 for drug free clients. This means that the average client who entered treatment was arrested at about the rate of once every two years thereafter.

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### Table 3.2
### Posttreatment arrest statistics by type of treatment

| Arrest history after beginning treatment | Type of Treatment<br>Methadone | Drug free |
|---|---|---|
| % arrested subsequent to start of treatment for all who started | 33% | 23% |
| Number of arrests per year after start of treatment for all who started | .51 | .46 |
| % arrested after treatment of those who stayed 12 months or longer or graduated | 27% | 14% |
| Number of arrests per year after start of treatment for those who stayed 12 months or more or graduated | .43 | .24 |

Reads: 33 percent of all those who entered methadone treatment were subsequently arrested.

The preceding figures were for all clients whether they stayed in treatment or left. As would be expected, those who stayed in treatment did better than the average. Of the methadone clients who stayed in treatment for a minimum of 12 months 27 percent were arrested and 73 percent were not. They averaged .43 arrests per year after entering treatment. Most of these methadone clients were in treatment for the entire period for which we have State Police arrest data. This means that methadone clients continued to be arrested at a fairly substantial rate even while being enrolled in treatment.

There is much more variation in post-treatment arrest behavior than was the case with pre-treatment arrests. At the program with the lowest rate of post treatment arrests the figure was only .11 arrests per year. This was just one-tenth the rate for the highest arrest rate program whose clients averaged 1.13 arrests per year while still enrolled in treatment.

The proportion of people successfully completing treatment or staying in treatment during the entire period of our statistical follow-up was much lower for drug free programs than was the case for methadone programs. However, those in drug free treatment who either spent 12 months or longer in treatment or were considered by their programs to have graduated did far better than the counterparts in methadone treatment. At three of the eight programs, there were not enough clients who spent 12 months or longer or graduated from treatment to allow the programs to be analyzed. Considering just the five programs where there were enough such clients, only 14 percent of those who underwent long-range treatment were subsequently arrested and they averaged .24 arrests per year per person.

As was the case with the methadone clients there was considerable variation from program to program. The program whose long term clients were most likely to be arrested subsequent to treatment had 25 percent of the clients who completed treatment arrested subsequently. They had .56 arrests per year subsequent to treatment. The program with the least post treatment arrests for its graduates and long term clients had only six percent of them arrested and the average was only .04 arrests per year subsequent to treatment or one arrest for every 25 person years after treatment.

In Chapter Four we will do a detailed analysis of arrest patterns, but at this point we will simply explain that the bulk of the arrests both prior to and subsequent to treatment were for non-narcotics' related charges. This means that those who got into trouble with the law did so not just by virtue of their narcotic use or because they were selling drugs, but presumably because they were doing something illegal to obtain the money for drugs.

One of the limitations of this study is that people were followed up for only 17 months on average after entering treatment. We thought

### Table 3.3
### One drug free Program's 1971 follow-up sample compared to the 1970 sample

| | Average time of entry into treatment | |
|---|---|---|
| | 1970 | 1971 |
| Number of arrests prior to treatment | 2.8 | 2.0 |
| Number of arrests per year after 18 before starting treatment | .76 | 1.21 |
| Number of arrests per year after starting treatment | .27 | .26 |
| Abatement in arrests | .49 | .95 |
| Average age at entry into treatment | 23 | 20 |
| Percent not arrested after treatment | 63 | 83 |

that possibly the rate of arrests in the first period after leaving treatment might be higher for those coming out of drug free treatment and attempting to reintegrate into the workaday world. For this reason we drew two samples from one drug free program--30 people who entered in or about October 1971 and 30 who entered in and around May in 1970. We therefore had a 22 month follow-up in the community for those who entered treatment in Spring 1970 and stayed the full 12 month term.

We found that the population had changed; the 1970 group were older and had had more arrests, but that the post treatment behavior was no different. 1970 clients had .27 arrests per year since beginning treatment or more than twice the total number of arrests of the 1970 clients who had .26 arrests per year. Thus we can probably expect those who leave drug free treatment to continue to incur arrests at approximately the same rate in the forseeable future.

## 4. The impact of retention in treatment upon criminality

As we have seen from the above data, those who stayed longer in treatment were less likely to be arrested. This is most vividly demonstrated in Table 3.4.

There is a linear relationship for drug free treatment. The longer a person spends in treatment the less are his chances of being arrested subsequent to beginning treatment. Of those who spent five months or less in treatment 48 percent were arrested. For those who spent six to 11 months, the figure drops dramatically to 31 percent. For those who spent 12 months or more in treatment, there is another dramatic drop to just 14 percent.

There is no similar linear relationship between time spent in treatment and likelihood of being arrested subsequently for methadone clients. Those who spent five months or less are no more likely to be arrested subsequently than those who spent six to 11 months. There is a substantial drop in the proportion arrested for those who spent 12 months or more in treatment. Of those who were in treatment for 12 months or longer only 26 percent were arrested subsequent to beginning treatment. This probably reflects the difference between being in treatment and out of treatment for methadone clients. Most of those who spent 12 months or longer in treatment were still in treatment at the time we stopped collecting arrest data. Only 27 percent of them were arrested compared to approximately 40 percent of those who spent less time in treatment. Methadone clients were more likely to be arrested while in treatment than we would have expected; but they were considerably less likely to be arrested than were those who had been in treatment and left.

The overall results of methadone treatment compared to the results of drug free treatment are quite different because the characteristics of the clients are so different and because the retention rate in treatment is so different.

Table 3.4

Percent arrested after beginning treatment
by length of time in treatment
by type of treatment

| Length of time spent in treatment | Type of treatment<br>Methadone | Drug free |
|---|---|---|
| 5 months or less | 39% | 48% |
| 6-11 months | 42 | 31 |
| 12 months or longer | 27 | 14 |

Reads: 48 percent of those who spent five months or less in drug free treatment were subsequently arrested compared to 31 percent of those who spent between six and 11 months.

The retention was measured by determining what proportion of those who were in treatment when we drew the sample (the average sample was drawn in October 1971) were either still in treatment on December 31, 1972 or graduated from the program if it was a drug free program or transferred to another program or were still enrolled if it was a methadone program. Many clients spend a considerable length of time in drug free treatment programs who are not considered graduates. Programs vary greatly in their criteria for graduation or successful completion of treatment. We saw from Table 3.4 that the longer one spends in drug free treatment the less likely he is to be arrested after beginning treatment, regardless of whether or not he is considered a graduate by the program. As was to be expected, methadone programs were much more likely to retain their clients in treatment than were drug free programs to graduate theirs. There was also much greater variation among drug free programs than there were in methadone programs.

Overall, 69 percent of those who entered methadone treatment in October or thereabouts in 1971 were still enrolled in treatment on December 31, 1972 either in the original program or at another program to which they had transferred. The lowest ranked program had a 37 percent retention rate and the next lowest had a 46 percent retention rate. Because the average length of time over which we measured retention was 15 months, and not 12 months, the probability of a person entering methadone treatment and staying in it for at least a year was closer to eight out of ten than seven out of ten for seven of the nine programs.

It is not quite so easy to draw conclusions about retention from the drug free programs. Not only did we draw samples of people who entered treatment differently from program to program but the definitions of graduation varied from program to program. Some programs require only six months in treatment to be eligible for graduation; while in others the period is usually one year and in others the period is indeterminate. Some programs continually reclassify those who have previously passed through them and only those who are thought to be doing well are considered to be graduates.

We have retention data at all ten of the drug free programs. On average, the programs retained for 15 months or graduated 31 percent of those who entered treatment in the fall of 1971. Five of the ten programs had figures of 40 percent or higher. Two programs which required only about six months of residence for graduation had the highest rates at 63 percent and 55 percent. Two of the programs had a retention or graduation rate of zero according to our measure.

Table 3.5

Retention rate by treatment program

| | Number in sample | % still in treatment 12/31/72 or graduated* |
|---|---|---|
| 1. Highest retention methadone program. | 31 | 81 |
| 2. Lowest retention methadone program. | 30 | 37 |
| 3. Nine methadone program's average. | 30 | 69 |
| 4. Highest retention drug free program. | 30 | 63 |
| 5. Lowest retention drug free program. | 20 | 0 |
| 6. 10 drug free program's average. | 28 | 31 |

*Graduates were included in percent retained for drug free treatment only. For the methadone clinics we included as retained those who'd transferred to another methadone program and were still in treatment.

## 5. Abatement in criminality due to treatment

We chose the word abatement to describe the reduction in criminality because it is quite clear that treatment has not eliminated criminality, even for those who stay in it. However, when we compare the number of arrests per year prior to treatment to the number of arrests per year subsequent to entry into treatment, it is clear the treatment results in a reduction or abatement in most treatment programs. However, at two of the treatment programs, one a methadone program and one a residential drug free program, the clients had a larger number of arrests per year subsequent to entry into treatment than they had had prior to entry into treatment. At the rest of the programs there was a reduction or abatement.

The average abatement for the drug free programs was greater than that of the methadone treatment programs. The average difference in the number of arrests per year before treatment and after treatment for drug free programs was .23 compared to .16 for the methadone treatment programs.

Partially because such a large portion of those who entered the methadone treatment programs stayed, abatement for them was not much greater than it was for all clients. For those who stayed in treatment at least 12 months or were transferred to another program, abatement was .21 arrests per year. For the drug free programs there was a much greater difference. A small portion of drug free clients stayed in treatment for 12 months or longer or were graduated, but the abatement was at the rate of .63 arrests per year or more than double the rate for all clients of drug free treatment programs.

## 6. Abatement by treatment program

There was much more variation in the abatement of drug free programs than was the case with methadone treatment. At some of the drug free programs there was little abatement, but three of the drug free programs had higher abatement rates (for all clients whether or not they completed treatment) than any methadone program.

The rates of arrest for methadone clients subsequent to entry into treatment were fairly low for two of the programs, but in each case, the rates of arrest per year prior to entry into treatment were also low. Therefore, abatement was negligible. Two other programs showed very modest reductions in the number of arrests per year. At one program the figure actually increased. What was interesting about this program is that those who stayed in treatment did even worse than the total group in the sample who entered treatment in the fall of 1971.

Two of the drug free programs that showed substantial abatement had fairly high numbers of arrests per year after beginning treatment, but their figures per year prior to entering into treatment were so high that the abatement was substantial despite a large proportion of their clients being arrested after beginning treatment.

### Table 3.6
### Abatement in criminality due to treatment by type of treatment

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| | Type of treatment | |
|---|---|---|
| | Methadone | Drug free |
| 1. Number of arrests per year (after 18) before treatment | .67 | .69 |
| 2. Number of arrests per year after entry into treatment | .51 | .46 |
| Abatement (1 - 2) | .16 | .23 |

One program achieved its high rate of abatement because of the extremely low rate of arrests of their clients after leaving treatment. This program averaged only .04 arrests per year after treatment. The arrests per year after entry into treatment for another program were low, but so were the number of arrests per year prior to entry into treatment. Because of the low number of arrests per year prior to entry into treatment, this program's rate of abatement was quite modest.

By our method of measuring one drug free residential program would seem to have had a negative effect. The clients at it had a fairly low rate of arrest prior to entry into treatment and a very high rate of arrest per year subsequently. In fact, those who entered this program in the fall of 1971 averaged 1.03 arrests per year subsequently, the highest for any program in our sample. The retention rate was also low and this of course contributed to these negative results.

For the drug free treatment programs, there is a strong relationship between the retention rate of the program and the abatement rate. Each is also strongly related to the percent of clients not arrested subsequent to beginning treatment. One exception was a program which had a fairly substantial rate of abatement in arrests per year of .27 going from .82 arrests per year prior to treatment to .55 arrests per year subsequent to treatment. This program also did well on retention with 63 percent of those entering treatment being considered graduates. However, it had the second highest proportion of its clients being arrested subsequent to entry into treatment with 45 percent.

Another statistical inconsistency was presented by a methadone maintenance program. From the point of view of retention in treatment and proportion of clients being arrested subsequent to entering treatment, this program did poorly. However, despite these two negative statistics the abatement of the program was substantial.

There was little relation between the abatement rate and the retention rate and the percent of clients not being arrested subsequent to beginning treatment for the methadone programs because the retention rate was nearly uniform for seven of the nine methadone treatment programs.

We have stated that the abatement rate is the best single measure of a treatment program's effectiveness. However, a comprehensive view of a treatment program would need to take into account not only the abatement in arrests but also the retention rate, the proportion of clients not arrested subsequent to beginning treatment, the number of clients served, the costs per client, and some measure of staff attitudes. Because there is little relation among these various measures except as stated above for the drug free treatment programs, all the figures need to be considered individually for each program before a judgment can be made about any given program.

## Table 3.7

### Arrests and abatement by type of treatment

| | | | Arrests before treatment (C thru E) | | | Arrests after beginning treatment (F & G) | | | Arrest data for those in treatment 12 months or more or drug free graduates. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number with arrest data | Months since treatment began | % no arrests | Average number of arrests | Number of arrests per year after 18 | % no arrests | Number of arrests per year | Abatement G-E | Number of clients | % with no arrests after treatment begins | Average number of arrests after treatment begins | Abatement* |
| | A | B | C | D | E | F | G | H | I | J | K | L |
| 1. Highest abatement methadone program. | 28 | 18 | 21 | 5.8 | .57 | 79 | .28 | .29 | 25 | 84 | .11 | .45 |
| 2. Lowest abatement methadone program. | 30 | 16 | 23 | 5.8 | .78 | 60 | .95 | -.17 | 22 | 59 | 1.13 | -.36 |
| 3. Nine methadone program's average. | 27 | 17 | 17 | 5.7 | .67 | 67 | .51 | .16 | 22 | 73 | .43 | .21 |
| 4. Highest abatement drug free program. | 30 | 17 | 30 | 2.0 | 1.21 | 83 | .26 | .95 | 12 | 92 | .18 | 1.35 |
| 5. Lowest abatement drug free program. | 19 | 17 | 58 | 1.2 | .43 | 53 | 1.03 | -.60 | 1 | -- | --- | ---- |
| 6. Eight drug free program's average. | 24 | 17 | 43 | 2.3 | .69 | 77 | .46 | .23 | 15 | 86 | .24 | .63 |

*Based on arrests per year of just those retained or graduated. Figure not shown.

## 7. The relation of abatement to demographic factors

This section will compare blacks to whites, males to females, and those younger in age to those older. Our use of the abatement figure allows us to control for behavior before entry into treatment.

In drug free treatment whites experience much more abatement in arrests than do blacks. Actually, each average about the same number of arrests per year after treatment. The whites averaged .86 arrests per year prior to treatment compared to only .58 arrests for the blacks. After beginning treatment, the whites averaged .41 arrests per year and the blacks .42 arrests per year. The abatement in arrests due to treatment was .45 arrests per year for the whites compared to only .16 for the blacks. The drug free sample was about equally divided between whites and blacks. Although the drug free blacks were slightly older than the drug free whites, they each began using heroin in the same year on average, 1968.

Abatement was identical in methadone treatment for whites and blacks--at the rate of .19 arrests per year. Again the whites had averaged more arrests per year before beginning treatment and they averaged more arrests per year after beginning treatment so that the abatement was equal. Whites outnumbered blacks in the sample 52 percent to 40 percent. The biggest group in the methadone treatment sample was the old, comprising 48 percent of the total. The modal group for the drug free sample was the young, comprising 62 percent of the total.

In each case, there was less abatement in arrests for those whom we classified as old. In fact, the small group of drug free older clients actually had more arrests per year after beginning treatment than they did before--.61 arrests per year. For the methadone treatment sample the middle-aged group had the least arrests per year subsequent to beginning treatment. The small younger group of the methadone clients had a larger rate of abatement because the rate of arrests prior to the beginning treatment was so large. For the methadone treatment group the important difference was between the middle-aged group and the older group (which we saw earlier constituted 88 percent of the total). For both groups, the number of arrests per year prior to beginning treatment was approximately equal. However, the older group was arrested at approximately twice the rate subsequent to beginning treatment as was the middle-aged group. Consequently, there was substantial abatement in arrests for the middle-aged group and no difference whatsoever for the older group.

The younger drug free clients had a lower number of arrests per year prior to treatment than did the middle-aged group and the number of arrests subsequent to treatment was also on the low side. The

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Table 3.8
Abatement in arrests by demographic
characteristics of clients by type of treatment

| | Methadone | | | | | | | Drug free | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ethnicity | | Sex | | Age | | | Ethnicity | | Sex | | Age | | |
| | White | Black | Male | Female | Young (22 or less) | Medium (23-26) | Old (27 or more) | White | Black | Male | Female | Young (22 or less) | Medium (23-26) | Old (27 or more) |
| Arrests per year after 18 before treatment | .75 | .61 | .76 | .29 | 1.05 | .60 | .68 | .86 | .58 | .79 | .05 | .69 | .83 | .53 |
| Arrests per year after treatment | .56 | .42 | .56 | .20 | .61 | .34 | .68 | .41 | .42 | .45 | .08 | .34 | .44 | .61 |
| Abatement in arrests | .19 | .19 | .20 | .09 | .44 | .26 | .00 | .45 | .16 | .34 | -.03 | .35 | .39 | -.08 |
| Percent not arrested after beginning treatment | 69 | 72 | 67 | 79 | 62 | 73 | 66 | 71 | 72 | 69 | 89 | 75 | 69 | 65 |
| Median age on 12/31/71 (start of treatment) | 24 | 26 | 25 | 24 | | | | 19 | 20 | 20 | 19 | | | |
| Median year begun heroin | 1966 | 62 | 63 | 67 | 66 | 66 | 64 | 68 | 68 | 68 | 69 | 68 | 67 | 64 |
| **Percent in sample** | 52 | 40 | 85 | 15 | 12 | 40 | 48 | 48 | 46 | 87 | 13 | 62 | 23 | 15 |

abatement for the young and middle-age clients of drug free programs was approximately equal. Although only 15 percent of the drug free sample was contained in the older age category, this group actually had more arrests per year after beginning treatment than it did before treatment. Only a small proportion of older clients go into drug free treatment, but those that do, do considerably more poorly than younger clients. These two factors may reinforce one another. Drug free programs rely on peer pressure and there are few older peers for the older clients.

For the two types of treatment the biggest difference in pre-treatment arrests is between those that are older, and these that are younger. The young methadone maintenance clients had the largest number of pretreatment arrests--1.05 per year compared to just .69 arrests per year for the young drug free clients. It is the policy of methadone treatment programs to discourage younger clients. Our data indicate that methadone programs are taking only those young people who have extensive pretreatment arrest histories.

## 8. Summary

We see that methadone treatment programs serve primarily middle-aged and older clients. There is a substantial amount of abatement of arrests with the middle-aged clients and none whatsoever with the older ones. Drug free programs serve primarily younger clients and they have had reasonable success with them. Both types of treatment are successful with young and middle-aged clients and neither has success with older clients.

The bulk of the analysis in this chapter is a comparison of arrests prior to and subsequent to treatment. We feel that this is a good form of data in that it is universally available, fairly objective, and a reasonable measure of the outcome the programs are trying to achieve.

We have also seen that there are substantial differences in terms of retention and arrest abatement between different types of programs. In subsequent chapters, we will examine the correlates of abatement.

## CHAPTER 4

## Arrest Patterns

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In this chapter we will examine the types of arrests that clients in our follow-up sample have incurred, the nature and proportion of arrests that occur during heroin use and we will contrast the types of arrests that occur prior to treatment with those that occur after. We will pay particular attention to the distinction between drug related arrests (such as the possession of drugs and sale of drugs) and other arrests which include all other types of crimes, particularly crimes against property such as robbery and breaking and entering.

### 1. Arrests prior to treatment

We saw in Chapter Three that the average client in the average methadone treatment program in our sample had a total of 5.7 arrests prior to entry into treatment and the average client in the average drug free treatment program had 2.3 arrests prior to entry into treatment. For each type of treatment, narcotics related arrests were in the minority. For the methadone programs, there were 2.0 narcotic arrests and 3.7 other arrests. For the drug free treatment programs there were 0.8 narcotic arrests and 1.5 other arrests. Narcotic related arrests made up 35 percent of the total in both the methadone treatment programs and the drug free treatment programs. The range of the percentages for individual programs for the two types of treatment was also approximately equal. In the methadone programs the range extended from a low of 27 percent of all pre-treatment arrests being narcotic related at one program to 49 percent of the arrests being narcotic related at another. For the drug-free programs the low was 29 percent and the high was 50 percent.

Demographic factors, especially age and ethnicity, had a strong bearing on the breakdown of arrests. Whites and younger people in both types of treatment programs were more likely to have had a high proportion of their total arrests for crimes related to narcotic offenses, rather than other types of arrests.

Considering both ethnicity and type of treatment, the whites in drug free treatment programs have the highest portion of arrests being due to narcotics related charges--50 percent. Whites in methadone maintenance have 40 percent of all their arrests for narcotics related charges. Blacks in methadone maintenance programs have 30 percent of their arrests due to narcotics related charges and blacks in drug free programs have only 23 percent of their arrests due to narcotics related charges. The difference with age is just as marked. Forty-five percent of the arrests of the young clients (22 years of age or younger) in the drug free programs are due to narcotics related charges compared to only 26 percent of the arrests for those in drug free treatment who are older (over 26). The same difference can be observed in methadone treatment.

## Table 4.1

Proportion of arrests prior to treatment that are narcotic related by treatment program

| | Average total # of arrests of all who entered Fall 1971 | # narcotics related arrests | # other arrests | % of total narcotics related |
|---|---|---|---|---|
| 1. Highest % narcotics related methadone program. | 5.5 | 2.7 | 2.8 | 49 |
| 2. Lowest % narcotics related methadone program. | 8.2 | 2.2 | 6.0 | 27 |
| 3. 9 methadone programs average. | 5.7 | 2.0 | 3.7 | 35 |
| 4. Highest % narcotics related drug free program. | 0.8 | 0.4 | 0.4 | 50 |
| 5. Lowest % narcotics related drug free program. | 2.1 | 0.6 | 1.5 | 29 |
| 6. Eight drug free programs average. | 2.3 | 0.8 | 1.5 | 35 |

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### Table 4.2
### Proportion of pretreatment arrests narcotics related by demographic characteristics and type of treatment

| | Ethnicity | | Sex | | Age | | |
|---|---|---|---|---|---|---|---|
| | White | Black | Male | Female | Young (22 & younger) | Middle | Old (27 & older) |
| **Methadone** | | | | | | | |
| Average total # of narcotics related arrests | 2.1 | 2.0 | 2.2 | 0.7 | 1.0 | 1.6 | 2.7 |
| Other arrests | 3.2 | 4.1 | 4.0 | 1.6 | 1.4 | 1.8 | 5.6 |
| % of total narcotics related | 40% | 30% | 35% | 30% | 42% | 47% | 33% |
| **Drug Free** | | | | | | | |
| Average total # of narcotics related arrests | 1.1 | 0.7 | 1.0 | 0.2 | 0.5 | 1.7 | 1.5 |
| Other arrests | 1.1 | 2.3 | 1.8 | 0.4 | 0.6 | 2.8 | 4.3 |
| % of total narcotics related | 50 | 23 | 36 | 33 | 45 | 37 | 26 |

In absolute number of arrests, whites in both types of treatment actually have more narcotics related arrests than blacks and less other arrests than blacks. This may mean either that blacks are more heavily involved in non-narcotics related criminality than are whites or that whites are more likely to be arrested on narcotics related charges than are blacks. Possibly this is because heroin use is more uncommon in white communities. Furthermore, many whites must go to predominantly black areas to purchase their drugs where they stand out and are subject to arrest.

## 2. Arrests while using heroin

For 200 of the clients in the methadone programs and 95 of the clients in the drug free programs we have been able to break the arrests before treatment into those that occurred prior to heroin use and those that came during heroin use. While we have data for all nine of the methadone programs, our data is restricted to just five of the ten drug free programs. The number is decreased in part because not all those in drug free treatment programs used heroin and we have background information on less people in drug free treatment than in the methadone programs.

The interesting finding from this data is that a very large proportion of the other arrests occurred during the period of heroin use. For those people for whom we have data, 91 percent of all other arrests of those enrolled in methadone treatment occurred while people were using heroin. This compares to 81 percent of all other arrests of those in drug free treatment programs. For three of the methadone programs the proportion of all other arrests occurring after the beginning of heroin use was 95 percent or higher.

The overwhelming majority of all arrests of both types occurred during the period of heroin use. For the average client from the average methadone treatment program, 94 percent of all arrests prior to the beginning of treatment occurred after beginning heroin use. The figure for the drug free programs is 83 percent. It is natural that the drug related offenses such as possession, use and sale would occur during heroin use. What was not expected was that the proportion of all arrests would be so high.

Other studies have shown that approximately one-half of the clients in drug abuse treatment programs were arrested before they began heroin use. This is also the case for the clients of the treatment programs we are studying. Forty-two percent of those enrolled in methadone treatment programs told us that they had been arrested prior to beginning heroin use and the figure for the drug free programs was 39 percent. Although they may have been arrested prior to beginning heroin use, the overwhelming proportion of arrests and presumably of crimes committed occurred after heroin use had begun.

## Table 4.3

### Age begun heroin and proportion of pretreatment arrests occurring during heroin use by treatment program

| | Number with data on heroin use | Average age begun heroin | Average year begun heroin | Average age entered treatment | Average number arrests before treatment | Average number arrests while using heroin | % of arrests while using heroin | % of other (non-narcotics) arrests while using heroin. |
|---|---|---|---|---|---|---|---|---|
| 1. Highest % of arrests occurring during heroin use, methadone program. | 22 | 20 | 63 | 28 | 6.5 | 6.4 | 98 | 95 |
| 2. Lowest % of arrests occurring during heroin use, methadone program. | 18 | 21 | 63 | 29 | 5.8 | 4.8 | 83 | 79 |
| 3. Average % of arrests occurring during heroin use, methadone programs. | 22 | 20 | 63 | 28 | 5.8 | 5.4 | 94 | 91 |
| 4. Highest % of arrests occurring during heroin use, drug free program . | 19 | 16 | 67 | 20 | 1.2 | 1.1 | 92 | 86 |
| 5. Lowest % of arrests occurring during heroin use, drug free program. | 22 | 22 | 68 | 24 | 2.9 | 1.8 | 62 | 56 |
| 6. Average % of arrests occurring during heroin use, drug free programs. | 19 | 19 | 67 | 22 | 2.7 | 2.2 | 83 | 81 |

There are several explanations for this. First of all, State Police arrest data covers only arrests occurring after the suspect is 18 years of age or older. Those enrolled in the methadone program on whom we have data began heroin use at 19.5 years of age; those enrolled in the drug free programs began heroin use at 18.5 years of age. There was little time between the age of 18 when the arrests on which we have data could have occurred and the time when heroin use began. Second of all, the first arrests which our clients reported in personal interviews, may not have actually been official arrests of the type which generate statistics. Some clients may simply have been simply taken in on suspicion and never formally charged.

The fact that such a large proportion of the arrests of those in our follow-up sample occurred after they had begun heroin use, suggests that whatever the reason they began their criminality, most of the crimes for which they got into trouble, and presumably most of their criminality, occurred while they were using heroin and the funds from their crimes against property were used to buy drugs.

There was more uniformity in the proportion of arrests occurring after beginning of heroin use among the methadone treatment programs than among the drug free programs. In five of the nine methadone programs 95 percent or more of all arrests occurred after the beginning of heroin use and in none of the five drug free programs was the figure higher than 92 percent. At three of the drug free programs the proportion of all arrests occurring during heroin use was between 80 and 89 percent and at one program, only 62 percent of the arrests occurred while the clients were using heroin.

### 3. Arrests after treatment

By and large the same types of arrests occurred before and after treatment. For the methadone programs exactly the same proportion of arrests--35 percent--were for narcotics related charges before treatment and after treatment. There was a slight but insignificant difference with the drug free programs where 35 percent of the arrests prior to treatment were for narcotics related charges compared to 41 percent afterwards. Overall about one-third of the arrests both before and after treatment were for narcotics related charges.

In summary we have seen that the overwhelming majority of arrests for those in treatment in drug abuse programs occurred after they began heroin use. Narcotics related charges account for only about one out of three arrests, both before and after treatment. Those in drug abuse treatment have been arrested a large number of times, but most of these arrests have occurred subsequent to the beginning of heroin use and by a two to one margin the arrests are for the standard kinds of crimes committed by non-drug abusers.

## Table 4.4

Abatement of narcotics related arrests compared to other types of arrests by treatment program.

| | Other (non-narcotic arrests) | | | Narcotics related arrests | | |
|---|---|---|---|---|---|---|
| | #/year before treatment | After treatment | Abatement | #/year before treatment | After treatment | Abatement |
| 1. Highest abatement of arrests, methadone program. | .52 | .30 | .22 | .24 | .17 | .07 |
| 2. Lowest abatement of arrests, methadone program. | .47 | .47 | .00 | .31 | .14 | .17 |
| 3. Average abatement of arrests, nine methadone programs. | .44 | .33 | .11 | .23 | .18 | .05 |
| 4. Highest abatement of arrests, drug free program. | .79 | .19 | .60 | .42 | .07 | .25 |
| 5. Lowest abatement of arrests, drug free program. | .25 | .55 | -.30 | .18 | .48 | -.30 |
| 6. Average abatement of arrests, eight drug free programs. | .46 | .32 | .14 | .24 | .15 | .09 |

## 4. Abatement in criminality due to treatment by type of arrest

In his study of the Addiction Research and Treatment Corporation program in Brooklyn, New York, Lukoff found that the abatement that occurred subsequent to treatment involved only narcotics related offenses. There was no diminution of other types of crimes. It was not surprising that methadone treatment should have an impact on narcotics related crimes. If their drug needs are taken care of, addicts should not be arrested for the sale, possession or use of drugs. It was extremely disturbing that this large Brooklyn methadone treatment program had no impact on the other types of crime committed by their clients.

Our findings show that there is a great deal of variation from program to program, but that the overall abatement rate applies to both narcotic related crimes and other types of crimes.

Probably because the rate is higher for the other types of crimes than for narcotic related crimes, the abatement is also higher. Looking at the methadone treatment programs, the average client in the average program had .44 other arrests per year prior to treatment and .33 arrests per year after treatment, an abatement of .11 arrests per year. This was double the rate of abatement for narcotics related crimes, where the average client in the average program had .23 arrests per year for narcotic related charges prior to treatment and only .18 arrests per year subsequent to treatment, an abatement of .05 arrests per year.

The same pattern holds for drug free programs. The average client in the average drug free program went from .46 arrests per year for other charges prior to treatment to .32 arrests per year after treatment, an abatement rate of .14 arrests per year. Regarding narcotics related charges he went from .24 arrests per year to .15 arrests per year, an abatement of .09.

This pattern did not hold true for all programs. Some programs did much better in the abatement of non-narcotics related crimes than they did in narcotics related crimes. All of the methadone programs showed an abatement of other types of arrests. The one program which had showed an overall increase in the number of arrests per year subsequent to treatment showed this increase only for the narcotics related offenses where their clients went from .27 arrests per year prior to treatment to .47 arrests per year after treatment.

Most of the drug free programs did equally on narcotics related arrests and other types of arrests. However, one program showed a slight abatement of narcotics related arrests, but an increase in the incidence of other arrests.

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We did an analysis comparing the way each of the treatment programs ranked (within modality) on the abatement of both types of crimes. Generally there was a great deal of consistency. For example, one methadone program ranked third on abatement of narcotics related crimes and second on the abatement of other types of crimes.

We wanted to see to what extent the ranks on the abatement of the two types of crimes were similar. If there was a difference of no more than three on the rank of a program on the two separate measures, we considered the program as being equal on both types of abatement. (The difference for the program cited above was only a difference of one between the second rank and the third place rank.) For five of the nine methadone treatment programs, the rank was approximately equal on the two types of abatement. For two of the methadone programs the rank was higher on the abatement of narcotics related arrests and for the other two the rank was higher on other types of arrests.

There was even more uniformity of rank in regard to the drug free treatment programs. Seven of the eight programs on which we have data saw the programs ranking equally on the abatement of the two types of arrests. The remaining program ranked high on the abatement of narcotics related crimes while its clients did not decrease at all in the number of other arrests per year.

Overall though, despite variation at a minority of programs, there was proportional abatement of both types of crimes. Clients in both types of programs had less arrests per year for both narcotics related crimes and other crimes after treatment than before.

# CHAPTER 5

## The Treatment Programs: Their Clients and Their Staffing

This chapter will discuss the results of two measures, the Quarterly Report of Treatment Rendered and the Staff Roster, which were compiled for all of the programs in the study. The two measures will each be discussed separately and then the results will be combined to yield staff-client ratios and costs.

### 1. The quarterly report of treatment rendered

For the seventeen programs in the sample (Narco and PUADA each offered both methadone and drug free treatment and they have each previously been considered as two separate programs) we compiled a listing of all the clients who received treatment during the period of October 1, 1972 through December 31, 1972. We then collected certain background data on each of those in treatment and recorded how they were functioning in terms of: employment, drug abuse, alcohol abuse, and illegal activities as of December 31, 1972.

We put information for each individual who received treatment on a data card so that we were able to do cross tabulations (by type of program and type of characteristic) on all the people receiving treatment.

The seventeen programs treatmd a total of 2,798 people during the period we studied. The methadone programs were considerably larger than the drug free programs on average, but all of the methadone programs with the exception of Patrick House served clients other than methadone maintenance clients. The three largest programs in terms of total number of clients treated in the three month period were all methadone programs: Patrick House--774, Plainfield Clinic--326, Monsignor Wall--303. The three smallest programs were all drug free: Christopher House--25 (although it is part of the larger Liberty Village Program), Damon House--31, and Harold House--32.

The following is a listing of the basic statistics collected as a result of the Quarterly Report with the totals for all programs.

### Age

The median* age for all clients was 24. We classified those 22 and younger as young and they constitute 35 percent of the sample. We

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*Age of the middle client. For example, if there were 31 in treatment, all would be ranked from youngest to oldest and the median would be the age of the 16th or middle client.

## Table 5.1

Treatment program statistics for the period
10/1/72 - 12/31/72

| | | Camden Clinic | Elizabeth Clinic | Mercer Clinic | Paterson Clinic | Plainfield Clinic | Narco | PUADA | Patrick House | Mar. Wall | Concept House | Integrity Youth | Christopher House | Harold House | Operation Concern | Northside ARC | Dismas House | Damon House | Total (based on total & not program averages) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | # in treatment as of 12/31/72 | 75 | 109 | 170 | 109 | 282 | 172 | 87 | 656 | 175 | 24 | 28 | 17 | 23 | 41 | 21 | 64 | 22 | 2075 |
| 2. | Median age | 26 | 26 | 27 | 25 | 24 | 24 | 26 | 24 | 23 | 21 | 17 | 23 | 17 | 18 | 22 | 21 | 20 | 24 |
| 3. | % female | 12 | 17 | 22 | 18 | 19 | 19 | 35 | 15 | 17 | 33 | 33 | 8 | 56 | 34 | 0 | 0 | 16 | 18 |
| 4. | Ethnicity: % black | 46 | 45 | 54 | 38 | 63 | 59 | 64 | 35 | 11 | 59 | 53 | 56 | 16 | 0 | 92 | 25 | 58 | 43 |
| | % hispanic | 5 | 2 | 2 | 5 | 0 | 5 | 5 | 12 | 1 | 6 | 8 | 4 | 0 | 0 | 8 | | 6 | 5 |
| 5. | Principal drug abused % heroin | 100 | 96 | 97 | 99 | 88 | 93 | 100 | 100 | 92 | 98 | 51 | 100 | 9 | 26 | 100 | 93 | 97 | 93 |
| 6. | % veterans | 18 | 19 | 23 | 1 | 9 | 13 | 12 | 15 | 10 | 8 | 0 | 16 | 0 | 0 | 8 | 5 | 6 | 13 |

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classified those aged 23 to 26 as middle-aged and they made up 34 percent of the sample. We classified those 27 and older as old and they made up 31 percent of the sample. The oldest median age was at the Mercer Clinic and that was 27. The median age at the Integrity House Youth Facility and Harold House was ten years younger--17.

## Sex

Overall, 18 percent of the clients were female and 82 percent were male. There were no females at Northside Addicts Rehabilitation Center, or Dismas House and females constituted only eight percent of those treated at Christopher House. Women were in the majority at only one program, Harold House, where they constituted 56 percent of those treated.

## Ethnicity

Whites were in the majority, making up 52 percent of the total. Forty-three percent were blacks and five percent were Hispanic clients. However, blacks were in the majority at nine of the 17 programs and they made up 92 percent of those treated at Northside Addicts Rehabilitation Center. Hispanic clients were in the minority in all programs, their largest concentration being at Patrick House where they represented 12 percent of the clients.

## Heroin use

For 93 percent of all clients, the principal drug of abuse was heroin. At 14 of the 17 programs a minimum of 88 percent of the clients had heroin as their principal drug of abuse. The lowest percentage was Harold House at nine percent and this was followed by Operation Concern where it was 26 percent and Integrity House where the figure was 51 percent.

## Veterans

Overall, 15 percent of the males were known to be veterans. They were older with 32 percent of them being thirty years of age or older. From the background questionnaire (which will be reported on separately later) we found that only about one third of the sample we interviewed began the use of drugs in the service, while the rest were split equally, having begun either before or after the service. Thus only a small percentage of those in treatment in the 17 programs were Vietnam Veterans who became addicted while in the service.

## Principal treatment rendered

Overall, 63 percent of all the clients were enrolled in methadone maintenance treatment, 19 percent in drug free treatment and five percent were receiving or had received detoxification treatment. The balance received a variety of forms of treatment which were classified as other, which included irregular counseling and urine checks for probation departments which were not considered as regular drug free treatment.

# Table 5.2

## Demography by type of treatment

| | | Type of Treatment | | | | |
|---|---|---|---|---|---|---|
| | Age | Methadone maintenance | Drug free | Detoxification | Other | |
| 22 and younger | 35% | 36% | 39% | 6% | 19% | 100% |
| 23 - 26 | 34% | 70% | 11% | 5% | 13% | 100% |
| 27 and older | 31% | 82% | 7% | 3% | 8% | 100% |
| | 100% | | | | | |
| | Ethnicity | | | | | |
| White | 52% | 66% | 19% | 4% | 11% | 100% |
| Black | 43% | 57% | 21% | 5% | 17% | 100% |
| Hispanic | 5% | 80% | 17% | 1% | 2% | 100% |
| | 100% | | | | | |
| Total | | 63% | 19% | 5% | 13% | 100% |

**Reads:** 36 percent of the younger clients are in methadone treatment compared to 82 percent of the older ones.

We obtained the methadone dosages of those enrolled in methadone treatment. For 10 percent of those treated the daily dosage was 120 miligrams or more. Dosage was 90 to 119 miligrams for 46 percent of the total and less than 89 miligrams for the remaining 44 percent.

### Treatment status as of December 31, 1972

Seventy-seven percent of all those who received treatment during the quarter were still enrolled in treatment on the last day of the quarter. The programs which ranked highest were two methadone programs at 93 and 90 percent. The programs which ranked lowest were two drug free programs at 38 and 40 percent. For all 17 programs there were 2,075 clients reported as enrolled in treatment as of the end of the quarter, December 31, 1972.

### Length of time since entering treatment

When possible we obtained the date that each client first obtained treatment at that program. We classified those who received their first treatment prior to October 1, 1971 as having been long in treatment and those who were first treated on October 1, 1972 or later as having been in treatment a short time. Overall, a surprisingly high 42 percent of all clients had been long in treatment entering, prior to October 1, 1971. The programs with the largest percents of long term clients were three methadone programs at 77 percent, 63 percent, and 56 percent.

## 2. Demographic differences

This section will report only on differences in characteristics in relation to one another. For example, blacks and Hispanic clients were more likely to have used heroin than whites--97 percent compared to 90 percent. Males were likely to have heroin as their drug of principal abuse than women--94 percent to 87 percent. There was no difference in the sex ratio of the various ethnic groups; there were equal proportions of women among the three ethnic groups.

The major difference was that older clients were much less likely to be enrolled in drug free treatment than methadone treatment. Of the younger group, 36 percent were enrolled in methadone treatment and 39 percent in drug free treatment. Of the older clients, 82 percent were enrolled in methadone treatment and less than one-tenth as many, seven percent were enrolled in drug free treatment.

Looking at the percentages in the other direction, 40 percent of those in methadone treatment were older compared to only 11 percent of those in drug free treatment. Sixty-nine percent of the clients in drug free treatment were young compared to only 21 percent of those in methadone treatment.

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## Table 5.3

### Type treatment by demography

| | Ethnicity | | | |
|---|---|---|---|---|
| Type Treatment | White | Black | Hispanic | |
| Methadone maintenance | 54% | 39% | 7% | 100% |
| Drug free | 49% | 46% | 5% | 100% |
| Detoxification | 50% | 48% | 2% | 100% |
| Other | 43% | 56% | 1% | 100% |

| | Age | | | |
|---|---|---|---|---|
| | 22 and younger | 23-26 | 27 and older older | |
| Methadone maintenance | 21% | 39% | 40% | 100% |
| Drug free | 69% | 20% | 11% | 100% |
| Detoxification | 47% | 35% | 18% | 100% |
| Other | 50% | 33% | 17% | 100% |

Reads: 21 percent of those in methadone treatment are young compared to 69 per cent of those in drug free treatment.

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## Table 5.4

### Type treatment by status end of quarter and length of time in treatment

| | Status 12/31/72 | | |
|---|---|---|---|
| Type treatment | Still in treatment | Graduated | Left |
| Methadone | 89% | 1% | 10% |
| Drug Free | 62% | 9% | 29% |
| Detoxification | 11% | 0 | 89% |
| Other | 67% | 2% | 31% |
| Total | 77% | 2% | 21% |
| Type treatment and time entered treatment | | | |
| Methadone<br>(50%) Long - 9/71 or earlier | 91% | 1% | 8% |
| (45%) Intermediate | 88% | 0 | 12% |
| ( 5%) Short entered 10/72 or later | 86% | 0 | 14% |
| Drug free<br>(10%) Long | 79% | 15% | 6% |
| (59%) Intermediate | 67% | 8% | 25% |
| (31%) Short | 57% | 0 | 43% |

Reads: 89 percent of those who received methadone treatment during the quarter were still in treatment on 12/31/72 as compared to 62 percent of those who received drug free treatment.

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The largest groups of clients who received detoxification and other treatment were young also--47 percent and 50 percent respectively. Only 18 percent of those who were detoxified were older and only 17 percent of those who received other treatment were older.

Whites were slightly more likely to be enrolled in methadone treatment (66 percent compared to 57 percent for the blacks). Hispanic clients, however, were the most likely to be in methadone treatment with 80 percent of those in treatment being in methadone treatment.

Clients in methadone treatment were more likely to be white than black by a 54 percent to 39 percent margin; but clients in drug free treatment were about equally divided between whites and blacks.

There were no differences between men and women as to the type of treatment they were enrolled in.

### 3. Persistence in treatment.

What proportion of those clients who were in treatment at the beginning of the quarter were still there at the end of the quarter? Ninety-one percent of the long term methadone clients were still in treatment at the end of the quarter and all those who "graduated" (one percent) were from this group. Eight percent left treatment during the quarter. Of the intermediate clients, 88 percent were still in treatment at the end of the quarter and 12 percent had left. Of the new clients, 86 percent were still in treatment at the end of the quarter and 14 percent had left.

The bulk of the drug free clients had been in treatment either a short or intermediate time (90 percent). Of the intermediate group (who entered treatment after October 1, 1971 and prior to October 1, 1972) 67 percent were still in treatment at the end of the quarter, 8 percent had graduated and 25 percent had left. Of the short termers, 43 percent had left treatment by the end of the quarter and only 57 percent were still in treatment. This demonstrates that a large portion of the splits from drug free treatment occur early in treatment.

The most interesting figure to emerge from this analysis is how few new entrants into treatment there were during the quarter studied. Of those who were still in treatment at the end of the quarter only 65 of the 1,494 methadone treatment clients or four percent entered during the three month period. Only 80 of the 334 drug free clients who were in treatment at the end of the quarter had entered during the quarter or 21 percent of the total. For the drug free programs this small number of entrants indicates a lessening of demand, for (as will be shown later) most of the drug free programs were operating well below capacity during the quarter. The answer is less certain for the methadone programs. Some were definitely filled to capacity and unable to take new clients.

Table 5.5

Type of treatment of those in treatment end of quarter by length of time in treatment

| | Long (entered before 10/1/71) | Intermediate | Short (entered 10/1/72 or later) |
|---|---|---|---|
| Methadone | 50% | 45% | 5% |
| Drug free | 13% | 60% | 27% |

In comparing the statistics between methadone and drug free programs it should be born in mind that methadone programs must continue to serve their clients over the years, whereas drug free programs serve their clients for only a relatively short period of time and then serve others. One reason so few clients came into methadone programs is that in most programs the retention was high and they could not serve more new clients without increasing in size.

## 4. Drug free treatment

The statistical picture of the drug free programs in terms of numbers of clients served is not excellent.

There were 334 clients in treatment at the end of the quarter. The average program had only 37 people.

Most drug free treatment programs have a specified length of treatment and those who complete it satisfactorily are considered graduates. Although the average program treated 65 people during the quarter, there are only 47 graduates for all the programs for an average of five per program. However, one program accounted for approximately one-half of the graduates of all nine programs.

The directors of each of the eight residential drug free programs told us what their capacity was during the quarter. The capacity of the average program was 65 people but the number pf people in the average program at the end of the quarter was only 37. The average program was filled to only 61 percent of capacity. Only one was filled to 75 percent of capacity or more. Three of the programs were filled to less than 50 percent of capacity.

## 5. Methadone treatment

For the methadone clients in treatment at the end of 1972, we have reports on how they were functioning in four areas: employment, drug abuse, alcohol abuse and illegal activities, whether or not they were arrested during the quarter. These reports of behavior were furnished by the clients' social workers or staff members who knew their behavior best.

Following are the results under each category of behavior:

### Employment

Considering students and women who were homemakers as being full-time employed, 69 percent of all methadone clients in treatment at the end of 1972 were full-time employed. Six percent were part-time employed, 21 percent were unemployed and we had no information on the employment status of four percent.

## Table 5.6

### Functioning of methadone clients in treatment 12/31/72 as reported by staff

| | |
|---|---|
| **Employment** | |
| Full time employed including students and homemakers | 69% |
| Part time employed | 6% |
| Unemployed | 21% |
| Other and unknown | 4% |
| | 100% |
| **Drug abuse** | |
| Frequent drug abuse | 5% |
| Occasional drug abuse | 10% |
| No drug abuse | 79% |
| Unknown | 6% |
| | 100% |
| **Alcohol abuse** | |
| Serious alcohol abuse problem | 5% |
| Slight alcohol abuse problem | 9% |
| No alcohol abuse problem | 81% |
| Unknown | 5% |
| | 100% |
| **Illegal activities - arrests during quarter** | |
| Drug related illegal activities | 2% |
| Other illegal activities | 5% |
| Both drug and other | 1% |
| No illegal activities | 86% |
| Unknown | 6% |
| | 100% |

## Drug abuse

The staff of the treatment programs considered five percent of the methadone clients to be frequent drug abusers and another ten percent to be occasional drug abusers.

Five percent were thought to have a serious alcohol abuse problem, and another nine percent were thought to have a slight alcohol abuse problem;

Two percent were reported to have been arrested for drug related illegal activities, five percent for other illegal activities, one percent for both drug and other illegal activities. It was reported that 86 percent had been engaged in neither type and the behavior of six percent was unknown.

What was the correspondence between drug abuse and alcohol abuse? Did the same clients abuse both substances or were these modes of behavior mutually exclusive? Those who were reported either to be frequent or occasional drug abusers or to have a slight or serious alcohol abuse problem constituted 24 percent of those enrolled in methadone treatment. Most of those who abused either substance abused only one and not both. Only 17 percent of the total abusers abused both alcohol and drugs. Forty-five percent of the abusers abused drugs and not alcohol and 38 percent abused alcohol and not drugs. Consequently, most of those who abused anything abused alcohol or drugs but not both.

Now let us turn to an examination of the relationship between drug abuse and alcohol abuse and employment and illegal activities for the active methadone clients. Both drug abuse and alcohol abuse had a serious impact on employment and illegal activities; but drug abuse had a more pronounced effect. Those who were reported as being drug free were 29 percent more likely to be fully employed than those who were reported to be frequent drug abusers. Those who were drug free were 28 percent less likely to have been arrested according to treatment staffs than those who were reported to be frequent drug abusers. Those who had no alcohol problem were 21 percent more likely to be full time employed than those who were reported as having serious alcohol problems and those who had no alcohol problems were 16 percent less likely to be arrested than those who were reported as having serious alcohol problems.

There were substantial differences in the four functioning variables by clinic and by demographic characteristics. However, there was little difference in functioning between the five State operated clinics and the other four methadone programs.

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Table 5.7

Convergence of drug abuse and alcohol abuse as reported by staff of treatment programs for those reported abusing either of active methadone clients.

| | % | N |
|---|---|---|
| Both alcohol and drugs abused | 17% | 59 |
| Drugs and not alcohol | 45% | 163 |
| Alcohol and not drugs | 38% | 135 |
| | 100% | 357 |

Of the total for whom the status of both were known 1,020 or 74 percent were not known to abuse alcohol or drugs.

The range on employment was substantial with 85 percent of the clients at the highest ranked clinic being reported as full time employed compared to only 56 percent of the clients at the lowest ranked one. The range on being drug feee was a high of 91 percent and a low of 60 percent. However, at the latter clinic, staff reported that a large proportion of their clients drug abuse status was unknown. Ninety-five percent of the clients at the highest ranked clinic were reported as having no alcohol problems compared to a low 55 percent at the lowest ranked one; but again a large proportion were reported as unknown.

Let us now consider the relationship between demographic characteristics and the four behavior items.

As far as employment is concerned, the older group was slightly more likely to be full time employed than the younger two groups. Males were much more likely to be full time employed than females, 71 percent compared to 51 percent, (even though females who were homemakers were considered to be full time employed.) Whites and blacks were each considerably more likely to be full time employed than Hispanic clients.

Females were slightly more likely to abuse drugs frequently than males and whites were slightly more likely to abuse drugs frequently than blacks.

Alcohol abuse was much more of a problem with the older clients and with the blacks. Seven percent of the older clients were reported as having serious alcohol abuse problems, nearly double the rate of the balance. Nine percent of the blacks were reported as having serious alcohol abuse problems compared to only two percent of the whites and less than one percent of the Hispanic clients.

There were no important demographic differences on the illegal activities or arrests except that Puerto Ricans were less likely to have been reported as having been involved in them than whites or blacks.

We also compared those who have been long in treatment (entering in September 1971 or earlier) with those who entered between October 1, 1971 and September 30, 1972--the intermediate group. To the extent that there might be differences on the four functioning variables we could conclude either that methadone clients had changed while in treatment, hopefully improving, or that those who had more behavior problems had dropped out of treatment. The interesting finding is that when the long term clients are compared with the intermediate clients there are no differences in three of the four behavior variables --drug abuse, alcohol abuse or illegal activities. The two groups are

Table 5.8.

Reported behavior by age, sex, ethnicity and time in treatment for methadone clients in treatment 12/31/72.

| | Age | | | Sex | | Ethnicity | | | Time in Treatment | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Young (22 & less) | Middle | Old (27 or More) | Male | Female | White | Black | Hispanic | Long Term (entered 9/71 or earlier) | Intermediate | Short (entered 10/72 or later) |
| % Full time employed | 66 | 66 | 71 | 71 | 51 | 71 | 67 | 58 | 71 | 66 | 52 |
| % Abuse drugs frequently | 4 | 7 | 4 | 4 | 10 | 7 | 4 | 1 | 5 | 6 | 6 |
| % Serious alcohol problem | 2 | 4 | 7 | 5 | 5 | 2 | 9 | 0 | 5 | 6 | 0 |
| % Illegal activities (arrests) during last 3 months | 8 | 9 | 9 | 9 | 8 | 9 | 10 | 3 | 10 | 8 | 2 |
| % of total | 22 | 39 | 39 | 83 | 17 | 55 | 39 | 6 | 51 | 44 | 4 |

reported as behaving similarly. There is only a slight change in regard to employment with 66 percent of the intermediate clients being full time employed compared to 71 percent of the long term clients.

Data on the length of time spent in treatment was recorded for only approximately 82 percent of the methadone clients. Approximately three times as many clients left methadone maintenance treatment during the quarter (October 1 - December 31, 1972) as entered it. Why did people leave treatment? According to the staffs at the treatment clinics the largest proportion, 30 percent left voluntarily. Twenty-one percent transferred to other programs and thus did not really leave methadone treatment. A substantial proportion, 13 percent, went to jail and many of those would have to be detoxified and withdrawn from treatment, especially if they had to wait a long time for trial or if they were sentenced to lengthy incarceration. Only 11 percent were reported as having been discharged by their programs, presumably for disciplinary reasons. Only two percent reportedly left for medical reasons. Eleven percent left for other reasons or their reason was not known to the treatment program.

What was the impact of differences on methadone dosage? Although there were some differences in levels of dosage from one clinic to another, the level of dosage was apparently in no way associated with either positive or negative behavior according to our measures of functioning. There were substantial differences between some clinics in average daily dosage. This suggests that dosage level is largely a matter of clinic policy and is not something changed to meet the individual needs of clients.

## 6. Staffing patterns

We obtained from each of the treatment programs a roster of each of their staff positions with a number of the characteristics of each staff member. We will report program averages for the seven drug free residential programs and for the five state clinics, but not for the five other programs (Operation Concern, Narco, PUADA, Patrick House and Monsignor Wall). They were too dissimilar. The following is a listing of the data and notations of some of the differences between the treatment programs.

### Number of staff

We determined the total number of staff and on the basis of the number of hours per week usually worked we computed the number of Full Time Equivalent staff members for each program. Someone who worked 31 hours a week or more on average was considered to be full time. A staff member working between 14 and 20 hours a week we considered a half timer. The average State methadone clinic had 18 staff members, or a total of 15 full time equivalent staff members. The average drug free

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## Table 5.9

Reported reason for leaving treatment for methadone clients during period 10/1/72 through 12/31/72

| | Number | Percent |
|---|---|---|
| Left voluntarily | 74 | 30% |
| Transferred to another (methadone) program | 53 | 21% |
| Went to jail | 31 | 13% |
| Completed program and were detoxified | 29 | 12% |
| Discharged | 27 | 11% |
| Medical reasons | 6 | 2% |
| Other or unknown | 27 | 11% |
| | 247 | 100% |

residential program had 18 staff members, or a total of 16 full time equivalents. The largest programs were two of the others with 79 and 52 full time equivalent staff members respectively. The five State clinics had a total of 76 staff members.

## Staff salaries

We were able to compute the total annual staff salaries for each program based on the roster of staff for the last week of December, 1972. We were also able to determine the average salary for the average full time equivalent staff member and the proportion of the staff that earned $10,000 per year or more. The five State Clinics were remarkably similar. They averaged $119,000 per year each in total staff salaries and the average full time staff member earned $7,900. The range was from $7,300 to $8,700. The average program's annual staff payroll at the drug free residential programs also was $119,000 a year and the average staff member earned $8,600. Here there was much more variation. The highest total payroll was $271,000 and the lowest $44,000. The variation in staff salary for the drug free residential programs was from $4,900 per year average for the lowest to $12,500 per year for the highest.

## Demographic characteristics of staff members

Overall there were interesting demographic differences with a large proportion of treatment programs staffs being women and minority group members.

At the average State clinic, 35 percent of the staff were minority group members and the same figure applied to the drug free residential programs. However, there was considerable variation. Two State clinics, had minority groups in the majority. At two others there were only six percent and 13 percent minority group staff members. Almost all the staff at two residential drug free programs (97 percent and 89 percent) were minority group members. At two other residential drug free programs there were no minority group staff and at another the figure was only three percent.

Most minority group staff members were black. The 17 programs employed only eight staff members of Hispanic origin and five of these were at two programs. There were no staff members of Hispanic origin at the five State clinics.

The majority of the staff at the State clinics were women, many of these were nurses involved in dispensing methadone. The proportion varied only from 56 percent to 70 percent with the average being 62 percent. Only 20 percent of the staff of the residential drug free programs were women, many of these held clerical positions. At only one program other than the State clinics, were women in the majority as staff members.

Table 5.10

Staff statistics as of 12/31/72

| | Seven drug free residential programs | | | Seven methadone clinics | | |
|---|---|---|---|---|---|---|
| | Drug free residential program with largest staff | Drug-free residential program with smallest staff | Drug free residential program staff average | Methadone clinic with largest staff | Methadone clinic with smallest staff | Methadone clinic staff average |
| 1-# staff total | 39 | 4 | 18 | 62 | 16 | 25 |
| 2-# full time equivalents | 39 | 4 | 16 | 52 | 12 | 20 |
| 3-Total salary in thousands | 271 | 50 | 119 | 479 | 94 | 178 |
| 4-Average salary in 1,000's per full time equivalent staff member. | 6.9 | 12.5 | 8.6 | 9.2 | 7.8 | 8.6 |
| 5-% of staff over $10,000. | 8 | 50 | 19 | 21 | 6 | 11 |
| 6-% Minority group staff. | 97 | 0 | 35 | 39 | 63 | 31 |
| 7-% Women | 44 | 0 | 20 | 32 | 63 | 53 |
| 8-% Ex-addicts | 46 | 100 | 59 | 15 | 19 | 11 |
| 9-% College grads or RN nurses. | 26 | 0 | 34 | 65 | 75 | 71 |
| 10-% served 12 months or more. | 18 | 50 | 49 | 47 | 69 | 63 |

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## Background characteristics

We inquired about the educational background of the staff members and whether or not they were ex-addicts.

At the State clinics 13 percent of the staff members were ex-addicts, but at the drug free residential programs the average was four times as high--59 percent. This varied 100 percent to none, with the exception of one additional program which had 38 percent of its staff as ex-addicts, none of the other programs had as many as 20 percent ex-addicts and two had none.

On education we divided the staff into two groups, those who had completed college or nursing school and those who had not. Because of civil service requirements and the large number of nurses employed, the State clinics had 73 percent of their staff members on average having completed post secondary education. At the State clinics, most of the staff were either graduates of post secondary education, nurses and social workers or they were ex-addicts who had usually not completed (or even attended) college.

At the drug free residential programs many fewer of the staff had completed post secondary education. Only at two programs were they in the majority. At two programs none of the staff had completed post secondary education.

## Length of service

We found out how long each staff member had worked for his or her program. At the State clinics 64 percent had been there 12 months or longer and the average staff member had served 16 months. At the residential drug free programs 49 percent had served 12 months or longer and the average was 15 months.

Overall there was considerable longevity of service considering that most of the programs were started between 1968 and 1970 and most have been expanding steadily in size.

## 7. Staff per client ratios and costs

In comparing the staffing patterns of the various programs it is important to keep in mind that it is more difficult than it appears to determine how many staff members at a given program actually render services to how many clients. All the State clinics receive additional support from the Division of Narcotic and Drug Abuse Control in the form of purchasing, hiring and administration. Several of the programs were part of larger units and it was difficult to determine what proportion of the entire staff should be allocated to drug abuse treatment. Only one program was still operating as a multi-modality program at the end of 1972--Narco. We arbitrarily divided the entire staff in half

## Table 5.11

### Aggregate costs by type of treatment*

| | Number in treatment 12/31/72 | Total staff costs | Cost per client | Number of clients per full time equivalent staff member |
|---|---|---|---|---|
| Methadone<br>Nine programs | 1,494 | $1,727,000.** | $1,200. | 6.3 |
| Drug free<br>Nine programs | 334 | $1,286,000. | $3,900. | 2.4 |

*Split the one multi-modality program 50-50.

**Includes all staff costs, although all but one provide treatment for other than methadone clients.

between the drug free operation and the methadone treatment for the purposes of analyzing staff client ratios. For the State clinics we figured costs and ratios only on the basis of methadone clients served, and this actually works to the disadvantage of those who served larger numbers of other types of clients. The number of clients included in the figures were only those enrolled in treatment at the end of December, 1972. The staff data is for the same period.

Table 5.11 tells the story of staff client ratios and costs. The State clinics were quite homogenous. The staff cost per year per client in treatment at the end of 1972 was $1,200 on average. The range was from a low of $1,000 to a high of $1,700. The least expensive methadone program was not a State clinic and there the cost was $700. per client.

There was substantial variation in the costs of the drug free programs. At the two most expensive, the staff costs per year per client in treatment at the end of 1972 were $11,300 and $8,400. At three of the programs the figure was $2,300 per year or less. At the residential programs the staff costs do not include the costs of shelter, utilities, food and recreation. The fact that some residential programs' staff client costs are four times those of others raises the question as to whether the costs of the more expensive programs could be lowered.

The aggregate figures on clients served, staffing patterns, and staff costs tell a lot about the differences between drug free treatment and methadone treatment in New Jersey. The nine methadone programs had 1494 people in treatment with a staff cost of $1,727,000. The staff cost per client was $1,200 on the average. The nine drug free programs cost almost as much for their staffs, but had only 25 percent as many clients. In the nine drug free treatment programs there were only 334 clients in treatment as of the end of 1972 and staff costs were $1,286,000 or $3,900 per client in the program. The argument that drug free treatment costs more, but would reach more clients if more money were available is belied by the fact that the average drug free program was operating at only 61 percent of capacity. In fact, costs per client in the drug free programs are high because of the fact that most of them are not filled to capacity.

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# CHAPTER 6

## The Causes and Correlates of Abatement in Criminality

### 1. Possible relationships and measures

There are four different types of data that we can relate to the abatement of criminality as measured in the number of arrests per year before treatment compared to the number of arrests per year after treatment. To the extent that there is a relationship between abatement and characteristics of either individuals or treatment programs, we can conclude that the characteristic is probably a cause of abatement. We have four different types of data which might yield correlates or causes of abatement in arrests:

1. Information on individuals in the follow-up sample either through the personal interview or reports on the persons' behavior by some third party.

2. Information on individuals in the treatment program provided by the Quarterly Report of Treatment Rendered.

3. Information on the staff of the treatment program as provided by the staff roster.

4. Information about the treatment program as provided by the questionnaire completed by staff members at the treatment programs.

For most of one above, we do not have sufficient background data on the drug free sample to allow us to relate background characteristics to abatement. For the methadone clients we have background questionnaires on an average of 20 people at eight of the nine treatment programs. For the methadone sample we can do two kinds of analysis: we can run cross tabulations of all the people in methadone treatment to relate characteristics to behavior outcomes after treatment, and we can relate the behavior characteristics of the clients in the treatment programs to the abatement of each of the programs.

The latter of the two methods is one that we will frequently apply and we will do this by means of the rank order correlation coefficient. We will rank the eight methadone programs for which we have background characteristics on the clients and we will compare the rank on a given characteristic, such as the proportion having completed high school, to the rank on abatement. If there is a strong correspondence in the two ranks, we will conclude that there is a correlation between that characteristic of the clients in the treatment program and the outcome of the treatment programs. *The rank order correlation is the statistic that describes the relationship between two different ranks*.

Let us describe how it works. If the four treatment programs: the Camden Clinic, the Elizabeth Clinic, the Mercer Clinic and the Paterson Clinic, ranked one, two, three, and four on both abatement of arrests and proportion of their clients who had completed high school, we would conclude that there was a strong correlation between these two characteristics and we could infer that the prior condition, having completed high school, was a causal or determinant factor for success in abatement. If four programs rank identically on two separate characteristics, the statistic denoting this would measure +1.0. If they ranked inversely (if the smaller the proportion of people having completed high school, the greater the abatement of the program), the statistic would be -1.0. The measure of .0 indicates no relationship. For example, if four programs ranked one, two, three, and four on one characteristic and three, one, four, and two on another characteristic, there would be no relationship between the two ranks and computation of the measure would show a .0 correlation between the two ranks.*

We will arbitrarily classify relationships between two ranks which are .50 or higher as *strong relationships* and relationships between two ranks that measure between .30 and .49 as *moderately strong relationships*.

In this chapter we will consider two kinds of relationships: those determined by cross tabulations of two characteristics and those measured by rank order correlations. The rank order correlation is extremely attractive because it allows us to measure the impact of characteristics among treatment programs when there are too few clients in each of the treatment programs (an average of 20 each) to measure this impact in any other fashion.

## 2. Effects of program characteristics

In this section we will look at all the items of data we have under the headings two, three, and four above. We will relate characteristics of the program as obtained from the Quarterly Report, the Staff Roster, and the Staff Questionnaire to the program's abatement. We will be interested in determining which, if any, characteristics of the program are correlated with the abatement of criminality.

Our first step in doing this was to rank all nine of the methadone treatment programs from one to nine on the basis of their abatement and the eight drug free programs for which we have data from one to eight on the basis of their abatement.

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*The actual statistical relationship is computed as follows for a comparison of four programs on two ranks: $1 - \frac{6\text{ (sum of the differences between each ranking squared)}}{3 \times 4 \times 5}$

Unfortunately, for the methadone programs there is no relation whatsoever between the rank of the program on the abatement of criminality and anything related to the characteristics of the program. For example, there was no correspondence between the two sets of ranks--abatement and the staff - client ratio. Similarly for the methadone programs there was no relationship with staff morale, or how good a job staff members thought the program did in the area of job placement, or the ethnic composition of the staff of the program, or the level of education of the staff, or the percentage of ex-addicts employed, or what the staff thought of the leadership of the program. As we will see later in this chapter there were a number of strong correlates of abatement based on the rank order correlation, but they were all due to the characteristics of the clients and none were due to the characteristics of the program.

For the drug free programs the story is quite different. There were many measures of the characteristic of the programs that correlate quite strongly with the rank of the drug free programs on the abatement of arrests. We are therefore able to say that these strong relationships between the two sets of characteristics suggest that there is causality.

The type of program characteristics which relate most strongly to the abatement of arrests in the drug free programs are items from the staff questionnaire. They relate to what the staff feels are the level of commitment of the program staff and the leadership of the program. Specifically, the strong relationships in the order of the strength of the rank order correlations are as follows:

1. Percent of staff of treatment programs reporting that staff teamwork is excellent - rank order correlation is .67.

2. Proportion of staff reporting that leadership ability of the program is excellent - rank order correlation is .64.

3. Percent of staff reporting "most of the staff really cares if the client stops using drugs" - rank order correlation is .62.

4. Proportion of staff reporting that communications in their program are excellent - rank order correlation is .61.

5. Proportion of staff reporting that staff morale is excellent - rank order correlation is .56.

6. Proportion of staff reporting that "the majority of clients treated at the program are definitely being helped by it" - rank order correlation is .33.

There was one moderately strong rank order correlation that was surprising because it was in the unexpected direction, or the causality was opposite the way that we would have predicted.

There was a moderately strong relationship - .33 between the number of clients served by each staff member and the abatement in arrests of the program. In other words, those programs that served more clients for each staff member had greater abatement than those programs that had greater number of staff for each client. This is exactly the opposite of what would have been predicted. Presumably the programs that had more staff members for each client would be able to do a better job and would have brought about more abatement. The reasons for this surprising relationship is that the two drug free programs that had the highest abatement - ranked 6th and 8th, in terms of having the most staff members for each client and the program which had one of the largest number of staff members for each client ranked last on abatement.

This is an extremely important finding. Most programs want to increase the size of their staffs and they usually claim that this will bring about improvement in the program. We have seen that at least for these eight drug free treatment programs in New Jersey, the more clients served by each staff member the more successful the program is in terms of abatement of arrests.

There were no relationships, either positive or negative, between any characteristic of methadone treatment programs and the abatement in arrests of the treatment programs. The relationships we did find for drug free programs suggest that the morale and attitude of the staff of the treatment programs is an important concomitant of success at drug free programs, but of no importance at methadone treatment programs.

### 3. The relation of present behavior to arrests after treatment

The cornerstone of this report which is based on the relationship between the number of arrests per year before treatment and the number of arrests per year after treatment is the arrest after treatment. If the clients in the follow-up sample who had stayed in treatment, had had no arrests after treatment and those who had not stayed in had had a substantial number of arrests after treatment, the impact of treatment would have been unequivocal. In this section we will try to understand the significance of the arrests after the beginning of treatment by relating the arrest data furnished by the State Police to other assessments of behavior as provided by third parties, usually the staffs of the treatment programs of the people in the follow-up sample.

Our data here allows us a good comparison between those who entered drug free treatment and those who entered methadone treatment. Of those in the follow-up sample who entered drug free treatment, we have 224 in the follow-up sample on whom we have data on employment, drug abuse, alcohol abuse, and illegal activities (or arrests) as provided by the staffs of the drug abuse treatment programs. Thirty-one percent of these people had been arrested after treatment. Of those who entered methadone treatment, we have 225 people in the follow-up sample for whom we have reports of behavior on the four items and 32 percent of them had been arrested subsequent to beginning treatment.

Table 6.1 describes the relationship between each of the four behavior items as reported by the individual treatment programs and arrest data as provided by the State Police.

There were significant differences between the impact of drug abuse and alcohol abuse.

For both types of treatment those who abuse drugs are more likely to be arrested subsequent to beginning treatment than those who do not and the impact is greater for the clients in drug free programs. Specifically 50 percent of those from drug free programs who were reported to have abused drugs (as recently as their behavior was known to the staffs of the treatment programs) had been arrested subsequent to beginning treatment compared to just 25 percent of those who were not reported to have used drugs since treatment. For the methadone programs the difference was only ten percent. Thirty-six percent of those who reported to have abused drugs were arrested subsequent to beginning treatment as opposed to just 26 percent of those who were not known to have abused drugs.

As is the case with drug abuse, those in drug free programs who did not abuse alcohol were less likely to be arrested. Twenty-seven percent of those who were not reported to have abused alcohol had been arrested subsequent to beginning treatment compared to 24 percent of those who were reported to have abused alcohol. In other words, those who had abused alcohol were very slightly more likely not to have been arrested.

Employment as reported by the staffs of the treatment programs was a less important correlate of not being arrested after starting treatment than we would have expected. Of those who were reported as employed at the drug free programs, 31 percent had not been arrested. Of those who were reported as unemployed the figure was 39 percent. At the methadone programs, however, there was no difference. Twenty-nine percent of each group, whether employed or unemployed were arrested subsequent to beginning treatment. This finding does not agree with other data which suggests that employment is important for those in methadone programs. It is possible that either the staff members of methadone programs did not have a clear enough picture of their clients' employment situations or that the question as asked did not distinguish sufficiently between those who were regularly gainfully employed and those who were marginally employed.

We also asked the staffs of the treatment programs to tell us whether their clients had been arrested in the preceding three month

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## Table 6.1

Percentage arrested after beginning treatment compared to behavior in past three months as reported by a third party

| Status last three months | Percentage arrested<br>Methadone<br>(N=225) | Drug free<br>(N=224) |
|---|---|---|
| Unemployed | 29 | 39 |
| Employed | 29 | 31 |
| Frequent or occasional drug abuse | 36 | 50 |
| No drug abuse | 26 | 25 |
| Serious or slight drinking problem | 24 | 39 |
| No drinking problem | 28 | 27 |
| Possible arrests | 66 | 55 |
| No arrests | 22 | 18 |
| Total | 32 | 31 |

Reads: 39 percent of the drug free clients who were unemployed were arrested after beginning treatment compared to 31 percent of those who were employed. There was no difference for methadone clients.

period. There was a good deal of convergence between the reports provided by the staff members of treatment programs and the more accurate data provided to us by the State Police. For the drug free programs, of those clients that staffs reported had been engaged in illegal activities or arrested, 55 percent had been arrested subsequent to treatment according to State Police records. This compared to only 18 percent of those whom the staff members reported as not having been involved in illegal activities. For the methadone programs the figures were similar. Sixty-six percent of those whom staff members reported had been involved in illegal activities were arrested according to the State Police. This compared to only 22 percent of those who the programs said had not been involved in illegal activities. This data suggests that the staff members are not aware of all the illegal activities involved in or arrests incurred by their clients. Approximately one-fifth of those who entered each type of program have been arrested despite the fact that the staffs of the treatment programs reported that they had not been engaged in any illegal activities or arrested.

In Table 6.2 we report the results of a battery of questions asked those still enrolled in methadone treatment about their behavior in the last three months. We asked each of the methadone clients about their behavior or functioning in eight specific areas either at the present time, or if more appropriate during the last three months. For example, we asked if during the past three months they had drunk heavily. Table 6.2 contrasts those who had said yes to each question with those who said no.

The difference in the percent being arrested subsequent to treatment between those who said yes and those who said no on the functioning questions indicates the importance of this type of functioning. When the difference is large that type of behavior can be said to contribute to not being arrested while in methadone treatment.

The biggest difference between those who answered differently on the functioning questions was in relation to employment. Those who said that they held a regular job or had been in school were much less likely to be arrested. Of those who answered yes to this question only 21 percent had been arrested compared to 41 percent who said no. This difference was 20 percent.

The other major difference was on the basis of happiness. Only 15 percent of those who said that they were presently very happy had been arrested compared to 33 percent of those who said that they were only somewhat happy or not happy.

There was a small but less substantial difference on just one more item, contributing to the support of someone other than ones self.

Table 6.2

Percentage arrested since beginning treatment compared to self reported behavior in last three months for methadone clients.

| Behavior | Behavior last three months |  | Difference between those who did and did not |
|---|---|---|---|
|  | Yes | No |  |
| Held a regular job or been in school | 21% | 41% | 20% |
| Very happy now | 15% | 33% | 18% |
| Contribute to the support of someone else | 24% | 34% | 10% |

Reads: 21 percent of those methadone clients who reported that they held a regular job in the last three months were arrested subsequent to beginning treatment compared to 41 percent who said they did not. This is a difference of 20 percent.

Twenty-four percent of those who said that they did contribute to the support of someone else (a wife or family) had been arrested compared to 34 percent of those who said they did not contribute to the support of anyone else. There were no significant differences in likelihood of being arrested after treatment related to having a car or an apartment or spending much time with drug users, or drinking heavily or using drugs to excess. Possibly the lack of relationship for drinking and using drugs is due to the fact that our respondents were more honest in reporting on their employment and on their happiness than on their drinking or drug abuse.

## 4. The relation of background characteristics to arrest after treatment

Unfortunately this analysis will be restricted to the approximately 160 methadone clients in the eight treatment programs for whom we have background data. Our findings are that the background characteristics of the clients of the methadone treatment programs have a tremendous impact on the rate of abatement of the treatment programs. Most of the characteristics of the clients that are strongly related to the abatement of their programs revolve around employment--employment both prior to entering treatment and employment while in treatment. The strongest determinant of employment in treatment is employment prior to treatment.

Specifically, the strongest relationship was to a background question about the client's employment history prior to entering treatment. We asked "what was the longest you ever worked for one employer?" We ranked each clinic on the proportion of its clients who had worked for one employer for one year or longer prior to entering treatment. The relationship between the rank of the clinics on this variable and the rank on abatement was extremely strong, characterized by a rank order correlation of .76.

Just to assure ourselves that the rank order correlation had meaning, we also did a cross tabulation of the two variables: length of time worked for one employer before entering treatment and whether or not the client was arrested after beginning treatment. We did this only for the males in methadone treatment. The results are shown in Table 6.3. Of those who reported that they worked for one employer for 24 months or longer only 26 percent were arrested subsequent to beginning treatment. Of those who reported that they worked for an employer between 12 and 23 months, the percent arrested after beginning treatment was 29 percent. Of the small number who reported that they worked for one employer for only 11 months or less prior to beginning treatment, the majority, 53 percent were arrested subsequent to beginning treatment.

This cross tabulation showed that the strong rank order correlation we found between the program's rate of abatement and the length of previous employment was indeed valid.

The next strongest correlate was on the basis of whether or not the client reported that he held a regular job within the last three months (while in treatment). The rank order correlation between the treatment program's abatement rate and proportion reporting that they held regular jobs within the last three months was .55.

The third highest correlate was not related to employment, but related to the type of family within which the client grew up. We divided the sample into those who came from intact families and those who did not. Fifty-nine percent reported that they had usually lived with their fathers and mothers when they were growing up. The balance did not. We were fairly liberal in our interpretations, accepting step-parents as fathers and mothers while growing up if the client felt that they were his parents. The rank order correlation between the proportion of clients at a clinic reporting that they came from intact families and the rank of the clinics on abatement was a moderately strong .48.

The next moderately strong correlate was also related to employment. There was a rank order correlation of .46 with the proportion of clients at a given program reported as fully employed on the Quarterly Report and the abatement of that program.

These four were the only substantial correlates with the rank of the methadone treatment program on the abatement of arrests. What this shows is that for methadone programs it is much more the characteristics of the clients prior to entering treatment that determine how well the program does in bringing about abatement in arrests, than anything in the program itself.

Since we have seen that the employment of clients both prior to beginning treatment and while in treatment is an extremely strong correlate of a program's rate of abatement, we decided to attempt to ascertain the correlates of employment in the last three months. First we ranked each program on the proportion saying they had usually been employed or been a student in the last three months. Then we ranked the programs on a number of possible correlates. The three strongest correlates in terms of their statistical significance were:

The proportion of clients having completed high school - rank order correlation .58;

The proportion of clients having worked one year or longer for the same employer - rank order correlation .52;

And the proportion of clients having earned $110. a week or more prior to entering treatment - rank order correlation .37.

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Table 6.3

Length of time worked for one employer before beginning treatment by percent arrested after beginning treatment of methadone males.

| Length of time worked for one previous employer | Arrested since entering treatment | | |
|---|---|---|---|
| | Yes | No | Number |
| 24 months or more | 26% | 74% | 85 |
| 12-23 months | 29% | 71% | 31 |
| 11 months or less | 53% | 47% | 17 |

This means that the primary determinants of employment while in the program are related to skills and previous employment and not to characteristics of the program. The better one's job history before entering treatment, the more likely he will be employed once starting treatment.

## 5. Summary

In this chapter we had a chance to interrelate our various measures to determine the correlates and causes of abatement and arrests due to criminality. We found that there were two very different types of correlates for the two types of treatment programs. In the drug free treatment programs various aspects of the programs such as staff morale, caring on the part of the staff, and the general attitudes of the staff members had a substantial impact on abatement. There was one surprising finding and that was that the more clients the staff members served, the greater the abatement of the program. At first glance this seemed unexpected. However, the explanation may be that more effective drug free treatment programs attract more clients due to word of mouth, and this means that each staff member serves more clients.

Although these factors were important at the drug free programs, they had no significance at the methadone treatment programs. One interpretation of this might be that in the methadone programs, methadone is the principal therapy and the staff members' attitudes and practices are far less important as long as they maintain control and dispense the methadone. Not having methadone, the drug free programs are entirely dependent upon the morale and capability of their staffs.

One reason that the methadone programs characteristics may have little impact on the success of methadone programs is that the crucial correlate of abatement in methadone programs are the background characteristics of the clients. We saw those programs whose clients had very substantial employment histories were much more likely to bring about a higher rate of abatement. Interestingly, it was the characteristics of the clients prior to entering treatment that were the strongest correlates of abatement.

Unfortunately, we were not able to trace the relationship between background characteristics of clients in drug free programs and the abatement of the drug free programs because of the fact that we did not have background data on a sufficiently large sample of drug free clients. This will remain for future research.

# CHAPTER 7

## The Impact of the Abatement of Arrests Due to Treatment Programs

This chapter will estimate how many total arrests have been abated or reduced by the 19 treatment programs. We know how many arrests were abated for the follow-up sample of 30 clients at each treatment program. What we need to estimate is how many clients this abatement rate applies to at each program in the course of one year.

For the purposes of projecting how many total arrests are abated by each treatment program and then the total of all treatment programs we will use the following four items of data in conjunction with one another:

1. The abatement rate: the difference in the number of arrests per year per client before entry into treatment and subsequent to entering treatment. We know this figure for the sample and we will estimate it for the entire program.
2. The retention rate: the number of those entering a treatment program at one period who are still there at some later time.
3. The number of people served by the program at a given point in time.
4. The number of new entrants into the program in a given period of time.

Each of these measures was determined differently and the results of each have been reported separately previously in the study. Now we will combine all of them to estimate the total number of arrests abated by the treatment programs. In such projections the reader must bear in mind that we are estimating what might have happened and not describing actual behavior. Because of the different nature of the two types of treatment programs, we have to use a different process of computation for methadone programs than for drug free treatment programs.

### 1. The abatement of drug free programs

The process is simpler for the drug free programs, so it will be described first. Drug free programs have a constant turnover which is dependent in part upon the length of stay required by the individual program for successful completion of the program and in part upon its retention rate. Ordinarily a period of about 12 to 15 months is the maximum amount of time required to be spent in treatment and some of the programs require only six months or even less for graduation. Obviously, the shorter the period of time required for completion of

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the program, the more different people can be served in the course of one year. Although drug free programs serve less people at any given time, the ratio of the number of people served in a given year to the number of people in treatment at any given time is higher because of this turnover factor. Because it is difficult to know what proportion of those in treatment at any given time will stay for a specified length of time, we used as the basis for estimating the number of people served by drug free programs the number of new entrants into treatment in a given period of time and not those actually there at a given time.

Table 7.1 shows the results of this computation. We took the number of people who entered during the quarter we studied, October 1 through December 31, 1972 and we multiplied this figure by four to project the number of people who might be expected to enter during a given year.

In our analysis we included only six of the ten drug free programs. Exclusions were made for the following reasons. Two drug free programs did not result in any abatement. Harold House and the Integrity House Youth Facility were excluded because their samples were too young to be involved in the kind of arrests that we are studying.

Our analysis of the six remaining drug free programs was done in the following fashion. We estimated the number of new entrants into each program in the course of one year by multiplying the number who entered in the quarter by four. These figures ranged from a high of 76 for one program to a low of 20 people for another.

We then had the number of people that each program could be expected to serve in the course of a year. We then multiplied this by the number of arrests the clients could have been expected to incur prior to treatment by using the average number of arrests per year prior to treatment for all those in our follow-up sample. The number of arrests that could have been expected to have occurred ranged from a high of 77 for the 64 people we estimated one program would serve in the course of a year to a low of 11 for the 20 people we estimated another program would serve in the course of a year.

To determine how many arrests these clients might be expected to incur after treatment, we multiplied the number of people expected to receive treatment in the course of one year by the number of arrests per year after treatment for all those in our follow-up sample. This ranged from a high of 33 for one program to a low of one for another.

To determine the amount of abatement that occurred we took the difference between the total number of arrests for all those who could be expected to enter the six programs - 254 arrests and subtracted from

### Table 7.1

### Total humber of arrests abated per year by six drug free programs

|  | # of new clients 10/1-12/31/72 | # of new clients in year (estimated by 4 X 1) | (A) Arrests expected based on # pre-treatment arrests per year-all clients | (B) Arrests which occured based on post treatment arrests per year-all clients | # of arrests abated (A-B) |
|---|---|---|---|---|---|
| Program with most abatements | 16 | 64 | 77 | 17 | 60 |
| Program with least abatements | 16 | 64 | 24 | 17 | 7 |
| Total all six programs | 81 | 324 | 254 | 126 | 128 |

it the number of arrests that might be expected to occur in the year after treatment - 126. This resulted in a projected abatement of 128 arrests. Looked at in another way we would say that those served by the six treatment programs could have been expected to have incurred 254 arrests and instead they incurred 126 which was a reduction of 50 percent.

Over a number of years the figure would become progressively more impressive. Most of these younger people served by drug free programs presumably do not need to receive further treatment and if the difference in arrests continued for a number of years, the total number of arrests abated by the drug free programs would be substantial. This is a reasonable expectation because the majority of those in the drug free programs were younger, and many had not used heroin at all or had used it for a fairly short period of time. Presumably many would not revert to drug abuse. As we saw earlier, most of the crime occurred during heroin abuse, (at least for those for whom we have heroin abuse data) and consequently no longer dependent on drugs they might well continue this abatement rate into the foreseeable future. Other studies have shown that the kinds of crimes that young men commit between the ages of approximately 14 and 25 are no longer committed later in life and consequently there is sort of a self cure for much crime if this occurs before the person becomes a hardened criminal. If anything, our projection is a conservative one because we have based abatement on the difference between the number of arrests per year between the age of 18 and the date entered treatment which would be higher.

The Lukoff study found that the arrest rate for the year immediately preceding entry into treatment was 40 percent higher than that of the entire period of addiction.

In summary, although the 128 arrests abated in the course of one year by the six drug free programs may not seem impressive, if a reasonable number of these people were not to return to drugs, the total number of arrests abated over a longer period of time could be quite substantial.

## 2. The abatement of methadone treatment programs

The computation of abatement cause by the methadone treatment programs is quite different from the computation done for the drug free treatment programs. As Table 3.4 suggests, only those clients who actually stay in methadone treatment have an abatement in arrests. In other words, abatement for methadone clients occurs only while they are still enrolled in treatment. We therefore based our computation on the number of people enrolled in a methadone treatment program over the course of one year and used the abatement rate for the long term clients in computing the abatement of the total program.

Most of the clients in a methadone program at any given point in time are long term. The average retention rate for all nine methadone treatment programs was 69 percent and that for seven of the nine programs was 73 percent or higher. We measured retention conservatively by finding out what proportion of the clients who were in treatment during October 1971 were still in treatment at the end of December 1972 or had transferred to another methadone program and were still in treatment.

We based our computation on the total amount of abatement in arrests brought about by the methadone programs on only eight of the nine programs in our sample, because the one program did not bring about abatement in arrests either for its long term or short term clients.

We computed the number of long term clients served by the methadone programs by a two stage process. First of all, we took the number in treatment at the end of December 1972 and multiplied it by the retention rate. For example, for Patrick House which had 656 people in treatment, we multiplied this figure by the 73 percent retention rate and determined that 479 of those could be expected to remain in treatment for the next year.

The problem was computing the replacements. If the program stayed constant in size, the 177 could only have been in treatment for six months, because we would assume the replacements would occur regularly throughout all 12 months of the year. We therefore divided the 177 replacements in two (as they would be in treatment only one-half of a year). We then multiplied the replacements by the retention rate of the program, which for Patrick House was 73 percent. We then determined that the Patrick House program would continue to serve 479 of its original clients throughout the year and in addition 65 replacements for a total of 544. (Actually the Patrick House program has been increasing continuously in size and thus the figure is not complete.) From then on our computations for the methadone programs were similar to those of the drug free treatment programs.

We determined that the eight methadone programs had 1150 clients for whom abatement could be expected throughout the year. We then multiplied the number of clients at each program by the number of arrests per year before and after treatment for each of these programs for the clients who had remained in treatment a minimum of 12 months or were still in treatment at the time of our follow-up.

Table 7.2 shows the computations for all eight methadone treatment programs that resulted in abatement. There were 1150 long term clients. They would have had 768 arrests or a reduction of 372. In other words, 48 percent of the anticipated arrests were eliminated.

Because our figures on clients were drawn at the end of 1972, this would be the midpoint of the year running from July 1, 1972 through June 30, 1973. Consequently, the year during which these arrests were abated was the 12 months beginning July 1, 1972.

Table 7.2

Total number of arrests abated per year by eight methadone treatment programs.

| | Clients staying | | | | Replacements in the year | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | (A) | (B) | |
| | # of clients in treatment 12/31/72 | Retention rate | # expected to be there 12/31/73 | # replacements needed to teach level of 12/31/72 | # replacements | # of clients over the year | Arrests expected based on # of pretreatment arrests long term clients. | Arrests which occured based on post treatment arrests long term clients. | # of arrests abated (A-B) |
| Total eight programs | 1,404 | 73 | 1,018 | 386 | 132 | 1,150<br>1 | 768 | 394 | 372 |

Comparing the two types of programs, the methadone programs enrolled approximately four times as many clients as the drug free programs, but abated only about three times as many arrests. Each of them abated approximately one-half the total number of arrests that their clients would have been expected to incur if they were not in treatment.

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